PB-248 894

A COMPENDIUM OF LAKE AND RESERVOIR DATA COLLECTED BY THE NATIONAL EUTROPHICATION SURVEY IN THE NORTHEAST AND NORTH-CENTRAL UNITED STATES

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16. ABSTRACT

Morphometric, limnological, and nutrient loading data are summarized for nearly 200 lakes and reservoirs studied during 1972-1973 by the U.S. Environmental Protection Agency's National Eutrophication Survey. The water bodies for which data are summarized are located in the states of Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New York, Rhode Island, Vermont, and Wisconsin.

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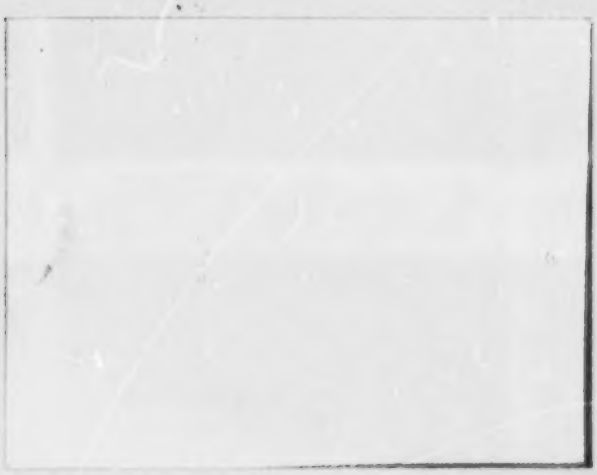

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A COMPENDIUM OF LAKE AND RESERVOIR DATA COLLECTED BY THE NATIONAL EUTROPHICATION SURVEY IN THE NORTHEAST AND NORTH-CENTRAL UNITED STATES

WORKING PAPER NO. 474

NOVEMBER, 1975

INTRODUCTION

The National Eutrophication Survey (NES) was initiated in 1972 by the U.S. Environmental Protection Agency (EPA) to investigate the nationwide threat of accelerated eutrophication to freshwater lakes and reservoirs. In conjunction with State environmental agencies, the Survey develops information on nutrient sources, inputs, and impacts on selected freshwater lakes throughout the contiguous United States. In total, over 800 lakes and reservoirs, 4,200 tributaries and lake outlets, and 1,000 sewage treatment plants are included in the sampling programs which involve a joint field effort by EPA personnel, the National Guard of each State, operators of municipal and industrial sewage treatment plants, and personnel of the respective State agency responsible for water pollution control activities. For details of the procedures and methods used in the geographical area encompassed in this report, refer to NES Working Paper No. 1, "National Eutrophication Survey Methods for Lakes Sampled in 1972".

One of the primary outputs of the NES program is the individual lake report in which are summarized the trophic condition; the nutrient sources, loads, and controllability; and the limiting nutrient. Each report also includes all of the NES data pertaining to the water body, the drainage area, and the nutrient point sources. To make the NES data accessible to many users, data in each lake report have been summarized

and are compiled in this report which includes information on the water bodies sampled during the first year of the Survey (1972). Geographically, this compendium includes data on lakes and reservoirs in Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New York, Rhode Island, Vermont, and Wisconsin. Compendia of data on water bodies in other areas of the U.S. will be prepared following completion of the individual lake reports.

COMPENDIUM COMPONENTS

In the compendium heading for each water body, the identifiers are given (NAME, STATE, principal COUNTY, STORET NO., WORKING PAPER NO., and NTIS ACCESSION NO.). Following the NAME, the trophic condition of the water body is shown in parentheses.

The trophic condition is based on an assessment of the lake data collected during the sampling year supplemented by results of past studies, if any, and communications with State personnel. Each lake was categorized as "OLIGOTROPHIC" (low nutrient levels and productivity), "MESOTROPHIC" (moderate nutrient levels and productivity), "EUTROPHIC" (high nutrient levels and productivity), or "HYPEREUTROPHIC" (very high nutrient levels and productivity).

Following the heading, the data are arranged in five categories:

I. MORPHOMETRY
II. PHYSICAL AND CHEMICAL CHARACTERISTICS
III. BIOLOGICAL CHARACTERISTICS
IV. NUTRIENT LOADING CHARACTERISTICS
V. NON-POINT SOURCE NUTRIENT EXPORT

Each of these categories contains related information as discussed below. If data or information were not obtained, a series of asterisks is shown.

I. MORPHOMETRY

The morphometric data were compiled from the literature and/or from information provided by State and Federal personnel.

LAKE TYPE - either of NATURAL origin or resulting from stream IMPOUNDMENT.

DRAINAGE AREA (SQ KM) - the total drainage area, measured to the lake outlet, in square kilometers.

SURFACE AREA (SQ KM) - the area of the water surface in square kilometers.

MEAN DEPTH (METERS) - the volume of the water body, in cubic meters, divided by the surface area in square meters.

TOTAL INFLOW (CMS) - the mean of the inflows of all tributaries and the immediate drainage in cubic meters per second.

RETENTION TIME (YEARS or DAYS) - a mean value determined by dividing the lake volume, in cubic meters, by the mean annual outflow in cubic meters per unit of time.

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

These data are based on three samplings of each lake during the ice-free period of 1972. For each lake, depending on its size, from one to many sites were sampled, and multiple depths were sampled at each site. For every parameter in this category, except Secchi disc depth, the median value is reported. The median represents the middle value of all sampling

stations, times, and depths. The mean of the SECCHI DISC depths at all stations and all sampling times is given.

MEDIAN ALKALINITY (MG/L) - total alkalinity, as $CACO_3$, in milligrams per liter.

MEDIAN CONDUCTIVITY (UMHOS) - specific conductance at 25°C in micromhos per centimeter.

MEAN SECCHI DISC (METERS) - the mean limit of visibility of a standard Secchi disc in meters.

MEDIAN TOTAL PHOSPHORUS (MG/L) - as P in milligrams per liter.

MEDIAN DISSOLVED PHOSPHORUS (MG/L) - as P in milligrams per liter.

MEDIAN INORGANIC NITROGEN (MG/L) - nitrate + nitrite + ammonia, as N, in milligrams per liter.

MEDIAN TOTAL NITROGEN (MG/L) - Kjeldahl nitrogen + nitrate + nitrite, as N (not determined in 1972).

III. BIOLOGICAL CHARACTERISTICS

MEAN CHLOROPHYLL A (UG/L) - the mean concentration of all samples, in micrograms per liter.

ALGAL ASSAY CONTROL YIELD (MG/L-DRY WT) - for the majority of lakes is based on one value, in milligrams per liter dry weight, obtained from an assay sample collected during the last (fall) sampling. The test organism was Selenastrum capricornutum Printz.

LIMITING NUTRIENT (no units) - may be determined by two procedures which are (1) the growth response of Selenastrum capricornutum to the addition of various amounts of phosphorus or nitrogen or (2) the ratio of inorganic nitrogen to dissolved phosphorus determined from the lake sampling data. When the inorganic nitrogen to dissolved phosphorus is 14/1 or greater, the lake is considered phosphorus limited, whereas ratios of less than 14/1 are considered indicative of nitrogen limitation.

The LIMITING NUTRIENT at each sampling time is given. For the first two sampling dates, the limiting nutrient is based on N/P ratios. The limiting nutrient for the third sampling date generally is based on algal assay results. However, if no value is shown for the ALGAL ASSAY CONTROL YIELD, the limiting nutrient for the third sample date is determined by the N/P ratio.

SUMMARY OF PHYTOPLANKTON DATA - the COUNT of individuals, filaments, or colonies per milliliter of sample for each of the five most numerous genera on the date shown. The sum of the units of other genera present in the sample, but not specified, is also included.

IV. NUTRIENT LOADING CHARACTERISTICS

Nutrient loads of significant tributaries and the lake outlet(s) were calculated using the results of analyses of from 12 to 14 samples collected from each stream by the State National Guard monthly for a one-year period and stream flow estimates as provided by the U.S. Geological Survey through an interagency agreement. The nutrient loads of the unsampled portion of the lake drainage areas were estimated from the measured nutrient loads in the sampled streams in the area. Nutrient loads of all streams and the unsampled drainage area were estimated on the basis of a year of average or "normal" stream flow to minimize the influence of extreme hydrological events that may have occurred during the sampling year.

Sewage treatment plant nutrient loads were determined from results of analyses of 12 monthly effluent samples and corresponding flow data provided

by plant operators or by State agency personnel. For sewage treatment plants which did not participate in the sampling program, nutrient discharges were estimated on the basis of the population served by the facility.

For details of sampling procedures and methods of calculation, refer to NES Working Paper No. 1.

A. INPUT - an estimate of all external inputs of nitrogen and phosphorus to the water body.

POINT SOURCE MUNCIPAL (KG/YR) - an estimate of annual nitrogen and phosphorus inputs from municipal sewage treatment plants in kilograms per year.

POINT SOURCE INDUSTRIAL (KG/YR) - an estimate of annual nitrogen and phosphorus inputs from industrial waste treatment plants in kilograms per year.

POINT SOURCE SEPTIC TANKS (KG/YR) - an estimate of annual nitrogen and phosphorus inputs from septic tanks within approximately 100 yards of the lake shoreline in kilograms per year.

NON-POINT SOURCE (KG/YR) - an estimate of the annual nitrogen and phosphorus inputs from tributaries, immediate drainage, and precipitation in kilograms per year.

TOTAL LOADING (KG/YR) - the sum of all external nitrogen and phosphorus inputs.

LAKE SURFACE AREA LOADING RATE (G/SQ M/YR) - the total loading for the sampling year divided by the lake surface area $(\frac{kg/yr}{km^2} \times 10^{-3})$ in grams per square meter of surface area per year.

B. OUTPUT - an estimate of the annual nitrogen and phosphorus discharged through the lake OUTLET(S) (KG/YR) in kilograms per year.

PERCENT RETENTION - the percentage of incoming nitrogen or phosphorus retained in the lake annually:

$$\left(\frac{\text{Input load-output load}}{\text{input load}} \times 100\%\right)$$

V. NON-POINT SOURCE NUTRIENT EXPORT

STREAM NAME -

MEAN FLOW (CMS) - the mean stream flow in a year of average hydrology in cubic meters per second.

DRAINAGE AREA (SQ KM) - the drainage area of the stream in square kilometers.

MEAN TOTAL P (MG/L) - the mean concentration of total phosphorus in the stream at the sampling site during the year of sampling.

MEAN TOTAL N (MG/L) - the mean concentration of total nitrogen in the stream at the sampling site during the year of sampling.

TOTAL P EXPORT (KG/SQ KM/YR) - the total phosphorus load of the stream (after subtracting known point-source loads) divided by the drainage area, in kilograms per square kilometer per year.

TOTAL N EXPORT (KG/SQ KM/YR) - the total nitrogen load of the stream (after subtracting known point-source loads) divided by the drainage area, in kilograms per square kilometer per year.

AVAILABILITY OF WORKING PAPERS

Compendium users desiring more detailed information may obtain a copy of the report on the water body of interest. Requests to the National Eutrophication Survey should include the NAME of the water body and the WORKING PAPER NO. as shown in the compendium heading.

Requests may be addressed to:

National Eutrophication Survey, EPA
Corvallis Environmental Research Laboratory
200 SW 35th Street
Corvallis, OR 97330

Only limited numbers of the Working Papers can be provided by NES.

When these are exhausted, Working Papers can be obtained from:

National Technical Information Service
Department of Commerce
Springfield, VA 22161

The NTIS accession number is shown in the compendium heading.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN CONNECTICUT

NAME - ASPINOOK POND (EUTROPHIC)
COUNTY - NEW LONDON, WINDOM
STORET NO. - 0901 WORKING PAPER NO. 176, NTIS ACCESSION NO. PB-240 315/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1851.85	1.35	2.7	35.5	1.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
20.	115.	0.8	0.092	0.053	0.590	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
35.8	13.6	(5/29/72) N	(8/ 4/72) N	(10/ 8/72) N

SUMMARY OF PHYTOPLANKTON DATA

8/ 4/72 GENERA	COUNT	10/ 6/72 GENERA	COUNT
CYCLOTELLA	1486	CYCLOTELLA	1133
ANABAENA	1159	SCENEDESMUS	530
DINOBRYON	1014	DICTYOSPHAERIUM	506
MELOSIRA	761	FLAGELLATES	307
NITZSCHIA	652	ANKISTRODESMUS	157
OTHER	3370	OTHER	1050
TOTAL	8442	TOTAL	3683

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	28259.	**********	14.	106816.	135098.
NITROGEN	80236.	**********	535.	1679467.	1760237.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	125927.	7.	100.24
NITROGEN	1610394.	9.	1306.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
QUINEBAUG RIVER	31.6	1644.6	0.133	1.589	63.	916.
CORY BROOK	0.4	19.4	0.036	1.336	15.	836.
CONE BROOK	0.065	2.1	0.041	1.256	28.	757.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN CONNECTICUT

NAME - BANTAM LAKE
COUNTY - LITCHFIELD
STORET NO. - 0902

(EUTROPHIC)

WORKING PAPER NO. 177, NTIS ACCESSION NO. PB-240 313/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	85.99	3.71	4.4	1.7	112.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
33.	110.	1.7	0.044	0.014	0.135	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
31.2	4.2	(5/29/72) N (8/ 1/72) N (10/ 4/72) N

SUMMARY OF PHYTOPLANKTON DATA

5/29/72 GENERA	COUNT	8/ 1/72 GENERA	COUNT	10/ 4/72 GENERA	COUNT
ASTERIONELLA	1092	OSCILLATORIA	4789	COELOSPHAERIUM	3825
DINOBRYON	1019	DINOBRYON	1235	FLAGELLATES	210
FRAGILARIA	195	SCHROEDERIA	602	ANACYSTIS(MICROCYSTIS)	180
ANABAENA	72	GLOEOCAPSA	392	SYNEDRA	136
MELOSIRA	29	CHROOCOCCUS	331	MELOSIRA	120
OTHER	124	OTHER	1326	OTHER	499
TOTAL	2531	TOTAL	8675	TOTAL	4970

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	190.	**********	**********	2132.	2322.
NITROGEN	535.	**********	**********	44562.	45098.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2431.	LOSS	0.63
NITROGEN	47927.	LOSS	12.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BANTAM RIVER	1.4	72.0	0.038	0.870	20.	432.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN CONNECTICUT

NAME - COMMUNITY LAKE (HYPEREUTROPHIC)
COUNTY - NEW HAVEN
STORET NO. - 0903 WORKING PAPER NO. 178. NTIS ACCESSION NO. PB-240 314/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	282.31	0.36	******	5.5	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
66.	280.	0.9	0.488	0.360	2.150	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
48.3	59.3	(5/29/72) N	(8/ 3/72) N	(10/ 4/72) N

SUMMARY OF PHYTOPLANKTON DATA

8/ 3/72 GENERA	COUNT	10/ 4/72 GENERA	COUNT
CHLAMYDOMONAS	14414	FLAGELLATES	2830
SCENEDESMUS	631	DINOBRYON	1170
NAVICULA	540	NAVICULA	679
CYCLOTELLA	450	MELOSIRA	528
SYNEDRA	450	CRYPTOMONAS	264
OTHER	1893	OTHER	2189
TOTAL	18378	TOTAL	7660

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	38236.	**********	**********	57007.	95243.
NITROGEN	179537.	**********	**********	397179.	576716.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	91810.	4.	261.49
NITROGEN	553528.	4.	1583.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
QUINNIPIAC RIVER	5.2	266.8	0.510	3.079	212.	1427.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN CONNECTICUT

NAME - EAGLEVILLE LAKE (EUTROPHIC)
COUNTY - TOLLAND
STORET NO. - 0904 WORKING PAPER NO. 179. NTIS ACCESSION NO. PB-240 317/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	287.49	0.32	0.9	5.3	0.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	90.	1.6	0.094	0.040	0.500	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
7.1	7.2	(5/29/72) N	(8/ 4/72) N	(10/ 8/72) P

SUMMARY OF PHYTOPLANKTON DATA

8/ 4/72 GENERA	COUNT	10/ 8/72 GENERA	COUNT
FLAGELLATES	2333	FLAGELLATES	829
NAVICULA	524	CYCLOTELLA	584
CRYPTOMONAS	398	NITZSCHIA	433
DINOBRYON	344	NAVICULA	433
CYCLOTELLA	253	ASTERIONELLA	320
OTHER	687	OTHER	1845
TOTAL	4539	TOTAL	4444

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	11374.	**********	14.	6127.	17515.
NITROGEN	69728.	**********	535.	180689.	250952.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	13819.	21.	54.10
NITROGEN	257710.	LOSS	775.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WILLIMANTIC RIVER	4.8	261.6	0.083	1.412	14.	586.
UNNAMED BROOK B-1	0.037	1.8	0.202	1.766	128.	1131.
CEDAR BROOK	0.3	13.2	0.178	1.821	111.	1106.
EAGLEVILLE BROOK	0.1	6.0	0.098	1.536	63.	981.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN CONNECTICUT

NAME - HANOVER POND (HYPEREUTROPHIC)
COUNTY - NEW HAVEN
STORET NO. - 0905 WORKING PAPER NO. 180. NTIS ACCESSION NO. PB-240 303/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	246.31	0.26	1.4	4.8	0.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
59.	265.	1.0	0.298	0.189	1.575	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
18.9	44.9	(5/29/72) N	(8/ 3/72) N	(10/ 4/72) N

SUMMARY OF PHYTOPLANKTON DATA

5/29/72 GENERA	COUNT	8/ 3/72 GENERA	COUNT	10/ 4/72 GENERA	COUNT
TRACHELOMONAS	2134	NAVICULA	579	DINOBRYON	753
CYCLOTELLA	904	NITZSCHIA	542	CRYPTOMONAS	392
FRAGILARIA	416	CHROOCOCCUS	452	NITZSCHIA	271
SYNEDRA	344	DINOBRYON	398	NAVICULA	271
NAVICULA	217	CYCLOTELLA	380	ACHNANTHES	211
OTHER	994	OTHER	1356	OTHER	1024
TOTAL	5009	TOTAL	3707	TOTAL	2922

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	29673.	**********	**********	26875.	56549.
NITROGEN	105900.	**********	**********	247143.	353043.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	56440.	0.	218.33
NITROGEN	380676.	LOSS	1363.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
QUINNIPIAC RIVER	3.9	199.2	0.433	2.418	118.	959.
SODOM BROOK	0.3	13.2	0.045	1.664	28.	1040.
HARBOR BROOK	0.6	30.8	0.161	2.082	97.	1268.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN CONNECTICUT

NAME - LAKE ZOAR (EUTROPHIC)
COUNTY - LITCHFIELD, NEW HAVEN
STORET NO. - 0910 WORKING PAPER NO. 181, NTIS ACCESSION NO. PB-240 310/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	3991.19	3.95	7.5	70.2	5.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
72.	220.	1.9	0.043	0.029	0.560	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(5/29/72) P	(8/ 3/72) P	(10/ 4/72) P
18.3	8.1			

SUMMARY OF PHYTOPLANKTON DATA

5/29/72 GENERA	COUNT	8/ 3/72 GENERA	COUNT	10/ 4/72 GENERA	COUNT
CYCLOTELLA	5262	DINOBRYON	251	MELOSIRA	241
FRAGILARIA	651	GLOEOCAPSA	221	FRAGILARIA	241
MELOSIRA	579	FRAGILARIA	186	CYCLOTELLA	211
ASTERIONELLA	398	ACHNANTHES	176	ANABAENA	211
SCENEDESMUS	181	CRYPTOMONAS	141	CRYPTOMONAS	121
OTHER	886	OTHER	612	OTHER	361
TOTAL	7957	TOTAL	1587	TOTAL	1386

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	10154.	**********	**********	144617.	154771.
NITROGEN	14231.	**********	**********	2747388.	2761619.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	116562.	25.	39.22
NITROGEN	2556381.	7.	699.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HOUSATONIC RIVER	62.7	3605.3	0.068	1.277	37.	697.
POOTATUCK RIVER	1.3	67.6	0.173	1.203	73.	625.
HALFWAY RIVER	0.6	28.0	0.032	0.956	19.	570.
KETTLETOWN BRANCH	0.3	12.9	0.044	1.416	26.	855.
UNNAMED STREAM(0-1)	0.096	4.7	0.031	0.978	18.	612.
LEE BROOK	0.059	2.8	0.018	1.126	10.	691.
BOYS HALFWAY RIVER	0.037	1.8	0.021	0.532	10.	135.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN CONNECTICUT

NAME - LAKE LILLINONAH (EUTROPHIC)
COUNTY - FAIRFIELD
STORET NO. - 0911 WORKING PAPER NO. 181, NTIS ACCESSION NO. PB-248 318/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	3605.28	7.69	11.9	62.7	17.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
80.	240.	3.7	0.054	0.048	0.660	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
11.1	12.2	(5/29/72) P	(8/ 3/72) P	(10/ 4/72) P

SUMMARY OF PHYTOPLANKTON DATA

5/29/72 GENERA	COUNT	8/ 3/72 GENERA	COUNT	10/ 4/72 GENERA	COUNT
CYCLOTELLA	4521	ANABAENA	663	FLAGELLATES	266
FRAGILARIA	579	CHROOCOCCUS	660	FRAGILARIA	241
MELOSIRA	452	GLOEOCAPSA	280	DINOBRYON	100
SYNEDRA	380	DINOBRYON	262	ANABAENA	65
ASTERIONELLA	289	SCHROEDERIA	81	NAVICULA	55
OTHER	1012	OTHER	43	OTHER	348
TOTAL	7233	TOTAL	1989	TOTAL	1075

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	29669.	**********	**********	193900.	223569.
NITROGEN	214957.	**********	**********	2786162.	3001118.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	133406.	40.	29.08
NITROGEN	2512589.	16.	390.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HOUSATONIC RIVER	52.8	3092.5	0.152	1.589	58.	785.
SHEPAUG RIVER	7.5	383.3	0.068	1.215	28.	671.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN CONNECTICUT

NAME - LAKE HOUSATONIC (EUTROPHIC)
COUNTY - NEWHAVEN, FAIR FIELD
STORET NO. - 0912 WORKING PAPER NO. 181, NTIS ACCESSION NO. PB-240 310/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	4076.66	1.33	2.9	71.8	0.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
84.	240.	1.9	0.039	0.029	0.570	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
8.2	2.9	(5/29/72) P	(8/ 3/72) P	(10/ 4/72) P

SUMMARY OF PHYTOPLANKTON DATA

8/ 3/72 GENERA	COUNT	10/ 4/72 GENERA	COUNT
DINOBRYON	2676	DINOBRYON	1407
FRAGILARIA	561	FLAGELLATES	1181
ANABAENA	325	MELOSIRA	829
GLOEOCAPSA	325	CRYPTOMONAS	327
CRYPTOMONAS	217	CYCLOTELLA	251
OTHER	778	OTHER	1231
TOTAL	4882	TOTAL	5226

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	118236.	118236.
NITROGEN	**********	**********	**********	2607147.	2607147.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	99506.	16.	89.07
NITROGEN	2459537.	6.	1964.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HOUSATONIC RIVER	70.2	3991.2	0.056	1.197	29.	641.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MAINE

NAME - ESTES LAKE (EUTROPHIC)
COUNTY - YORK
STORET NO. - 2304 WORKING PAPER NO. 3. NTIS ACCESSION NO. PB-239 657/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	271.95	1.57	3.0	5.0	11.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
13.	75.	1.0	0.094	0.057	0.230	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
28.3	11.2	(6/ 3/72) N	(8/ 5/72) N	(10/ 2/72) N

SUMMARY OF PHYTOPLANKTON DATA
10/ 2/72

GENERA	COUNT
OSCILLATORIA	1608
FLAGELLATES	1482
CRYPTOMONAS	377
ANABAENA	352
DINOBRYON	327
OTHER	2236
TOTAL	6382

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	11234.	**********	14.	3864.	15111.
NITROGEN	45193.	**********	481.	127129.	172803.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	14254.	6.	9.65
NITROGEN	193388.	LOSS	110.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MOUSAM RIVER	2.4	130.8	0.189	1.547	17.	396.
HAY BROOK	0.1	7.3	0.030	1.126	18.	652.
MIDDLE BR. MOUSAM RIVER	0.8	43.5	0.020	0.961	12.	560.
LITTLEFIELD RIVER	1.2	63.7	0.019	0.800	11.	466.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MAINE

NAME - LONG LAKE (MESOTROPHIC)
COUNTY - CUMBERLAND
STORET NO. - 2306 WORKING PAPER NO. 4. NTIS ACCESSION NO. PB-239 658/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	295.26	19.70	10.4	5.5	1.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
10.	50.	3.4	0.008	0.006	0.080	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
3.2	0.3	(6/ 3/72) P	(8/ 7/72) P	(10/ 2/72) P

SUMMARY OF PHYTOPLANKTON DATA
10/ 2/72

GENERA	COUNT
FLAGELLATES	1357
ANACYSTIS(MICROCYSTIS)	879
CHROOCOCCUS	704
DINOBRYON	352
SYNEDRA	352
OTHER	1607
TOTAL	5251

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	299.	2458.	2757.
NITROGEN	**********	**********	11256.	83578.	94834.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1388.	50.	0.14
NITROGEN	78757.	17.	4.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
STEVENS BROOK	2.0	107.7	0.019	0.366	9.	218.
ROGERS BROOK	0.2	10.1	0.020	0.693	13.	428.
SMITH BROOK	0.2	12.4	0.013	0.497	7.	313.
BEAR RIVER	0.9	47.7	0.011	0.359	6.	187.
CRYSTAL LAKE OUTLET	0.4	22.3	0.011	0.271	5.	158.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MAINE

NAME - MATTAWAMKEAG LAKE (MESOTROPHIC)
COUNTY - AROOSTOOK
STORET NO. - 2308 WORKING PAPER NO. 8. NTIS ACCESSION NO. PB-239 717/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	813.26	13.48	3.7	13.7	42.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
16.	65.	1.6	0.011	0.007	0.120	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
2.0	0.4	(6/ 6/72) P	(8/ 8/72) P	(9/28/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/ 6/72 GENERA	COUNT	9/28/72 GENERA	COUNT
DINOBRYON	111	FLAGELLATES	798
SYNEDRA	53	DINOBRYON	617
ASTERIONELLA	33	ACHNANTHES	286
NITZSCHIA	23	FRAGILARIA	271
NAVICULA	20	CYCLOTELLA	196
OTHER	73	OTHER	859
TOTAL	313	TOTAL	3027

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	4254.	**********	**********	3683.	7937.
NITROGEN	54698.	**********	**********	249714.	304413.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	5619.	29.	0.59
NITROGEN	230839.	24.	22.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
W BR MATTAWAMKEAG RIVER	5.5	321.4	0.019	0.686	5.	225.
FISH STREAM	5.0	294.5	0.012	0.771	3.	310.
DYER BROOK	1.5	88.1	0.081	0.803	5.	428.
SLY BROOK	1.0	57.5	0.010	0.803	6.	335.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MAINE

NAME - MOOSEHEAD LAKE (OLIGOTROPHIC)
COUNTY - PISCATAQUIS, SOMERSET
STORET NO. - 2309 WORKING PAPER NO. 2. NTIS ACCESSION NO. PB-239 656/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	3279.97	303.08	16.5	52.9	3.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
10.	50.	3.8	0.005	0.003	0.180	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
1.5	0.8	(6/ 5/72) P	(8/ 9/72) P	(10/ 1/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/ 5/72 GENERA	COUNT	8/ 9/72 GENERA	COUNT	10/ 1/72 GENERA	COUNT
DINOBRYON	49	DINOBRYON	197	FRAGILARIA	2387
SYNEDRA	30	CYCLOTELLA	51	CYCLOTELLA	1382
CRYPTOMONAS	22	MERISMOPEDIA	45	MELOSIRA	1005
ASTERIONELLA	20	ANACYSTIS(MICROCYSTIS)	34	ANABAENA	477
PERIDINIUM	10	FRAGILARIA	34	APHANOTHECE	402
OTHER	37	OTHER	124	OTHER	1558
TOTAL	168	TOTAL	485	TOTAL	7211

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	136.	24476.	24612.
NITROGEN	**********	**********	5134.	1217029.	1222162.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	13342.	46.	0.08
NITROGEN	916562.	25.	4.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MOOSE RIVER	31.3	1864.8	0.001	0.543	5.	282.
TOMHEGAN STREAM	1.1	61.4	0.015	0.526	9.	301.
ROACH RIVER	3.3	180.3	0.008	0.462	5.	284.
LILY BAY BROOK	0.8	34.7	0.012	0.634	8.	437.
MUD BROOK	0.2	11.9	0.014	0.802	8.	475.
BEAVER CREEK	0.4	23.3	0.001	0.524	6.	294.
UNNAMED BROOK (J1)	0.4	18.9	0.014	0.607	14.	672.
SQUAW BROOK	0.4	18.1	0.008	0.296	5.	208.
UPPER SQUAW BROOK	0.3	15.0	0.011	0.459	6.	255.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MAINE

NAME - RANGELEY LAKE (OLIGOTROPHIC)
COUNTY - FRANKLIN
STORET NO. - 2310 WORKING PAPER NO. 6. NTIS ACCESSION NO. PB-239 588/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	256.41	24.28	14.3	3.9	2.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	50.	3.8	0.007	0.005	0.110	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
2.4	0.4	(6/ 8/72) P	(8/ 7/72) P	(10/ 2/72) P

SUMMARY OF PHYTOPLANKTON DATA
10/ 2/72

GENERA	COUNT
DINOBRYON	632
FLAGELLATES	557
FRAGILARIA	346
ANACYSTIS(MICROCYSTIS)	331
ACHNANTHES	271
OTHER	1236
TOTAL	3373

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	331.	**********	145.	1692.	2168.
NITROGEN	1043.	**********	5370.	90240.	96653.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1102.	49.	0.09
NITROGEN	52834.	45.	4.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SOUTH BOG STREAM	0.7	39.9	0.001	0.059	5.	329.
LONG POND STREAM	1.0	54.4	0.011	0.444	6.	249.
HALEY POND OUTLET	0.4	25.4	0.037	0.829	4.	346.
DODGE POND OUTLET	0.8	46.9	0.012	0.724	6.	212.
QUIMBY BROOK	0.054	4.1	0.008	0.574	3.	235.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MAINE

NAME - SEBAGO LAKE (OLIGOTROPHIC)
COUNTY - CUMBERLAND
STORET NO. - 2311 WORKING PAPER NO. 5. NTIS ACCESSION NO. PB-239 659/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	1142.19	116.43	30.8	20.9	5.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	50.	5.1	0.004	0.003	0.155	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
1.5	0.1	(6/ 3/72) P	(8/ 7/72) P	(10/ 2/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/ 3/72 GENERA	COUNT	10/ 2/72 GENERA	COUNT
ASTERIONELLA	45	DINOBRYON	397
DINOBRYON	37	FLAGELLATES	266
SYNEDRA	25	MELOSIRA	241
NITZSCHIA	22	SYNEDRA	75
NAVICULA	20	FRAGILARIA	50
OTHER	55	OTHER	347
TOTAL	204	TOTAL	1376

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	517.	8744.	9261.
NITROGEN	**********	**********	19451.	528403.	547855.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3959.	57.	0.08
NITROGEN	482168.	12.	4.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
RICH MILL POND	0.3	16.1	0.018	0.711	11.	527.
NORTHWEST RIVER	1.0	57.0	0.011	0.699	6.	396.
MUDDY RIVER	0.8	41.4	0.012	0.506	7.	300.
CROOKED RIVER	7.5	396.3	0.012	0.468	7.	278.
SONGO RIVER	5.8	388.2	0.007	0.665	4.	395.
THOMAS POND OUTLET	0.2	13.7	0.009	0.801	5.	448.
PANTHER POND OUTLET	1.3	77.4	0.008	0.663	4.	434.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MAINE

NAME - SEBASTICOOK LAKE (EUTROPHIC)
COUNTY - PENOBSCOT
STORET NO. - 2312 WORKING PAPER NO. 9. NTIS ACCESSION NO. PB-239 702/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	326.34	17.35	5.8	6.0	200.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
30.	140.	1.1	0.050	0.024	0.110	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
49.5	8.3	(6/ 8/72) N	(8/ 7/72) N	(10/ 3/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/ 8/72 GENERA	COUNT	10/ 3/72 GENERA	COUNT
FRAGILARIA	122	FRAGILARIA	3660
MELOSIRA	95	FLAGELLATES	1283
CRYPTOMONAS	45	CHROOCOCCUS	906
STEPHANODISCUS	27	ANABAENA	528
SYNEDRA	7	DINOBRYON	453
OTHER	31	OTHER	2378
TOTAL	327	TOTAL	9208

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	8263.	**********	86.	3460.	11810.
NITROGEN	92726.	**********	3197.	197274.	293197.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	8358.	29.	0.68
NITROGEN	92141.	69.	16.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SABASTICOOK RIVER E. BR.	2.7	144.5	0.084	2.196	12.	708.
STETSON STREAM	0.6	34.7	0.014	0.720	8.	415.
MULLIGAN STREAM	1.1	53.9	0.017	0.966	10.	596.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MAINE

NAME - LONG LAKE (MESOTROPHIC)
COUNTY - AROOSTOOK
STORET NO. - 2313 WORKING PAPER NO. 7. NTIS ACCESSION NO. PB-239 638/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	234.14	24.28	13.4	3.2	3.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
26.	83.	2.6	0.010	0.006	0.200	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
6.9	0.1	(6/ 6/72) P	(8/ 8/72) P	(9/28/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/ 6/72 GENERA	COUNT	9/28/72 GENERA	COUNT
ASTERIONELLA	172	ANACYSTIS(MICROCYSTIS)	3585
FLAGELLATES	169	CHROOCOCCUS	2642
DINOBRYON	130	ANABAENA	2113
ANABAENA	75	FLAGELLATES	943
MELOSIRA	57	SYNEDRA	717
OTHER	181	OTHER	2453
TOTAL	784	TOTAL	12453

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	290.	**********	209.	2494.	2993.
NITROGEN	875.	**********	7832.	170036.	178744.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1311.	56.	0.12
NITROGEN	70358.	61.	7.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MCLEAN BROOK	0.7	39.9	0.019	1.426	10.	744.
LITTLE RIVER	0.5	32.4	0.030	1.432	13.	632.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MAINE

NAME - BAY OF NAPLES (OLIGOTROPHIC)
COUNTY - CUMBERLAND
STORET NO. - 2314 WORKING PAPER NO. 5. NTIS ACCESSION NO. PB-239 659/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	308.21	3.08	4.3	5.8	26.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	50.	3.2	0.005	0.003	0.070	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
1.8	0.2	(6/ 3/72) P	(8/ 7/72) P	(10/ 2/72) P

SUMMARY OF PHYTOPLANKTON DATA
10/ 2/72

GENERA	COUNT
FRAGILARIA	2792
DINOBRYON	1208
FLAGELLATES	1208
ANABAENA	1057
MELOSIRA	1019
OTHER	2452
TOTAL	9736

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	41.	1533.	1574.
NITROGEN	**********	**********	1565.	88431.	89995.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1279.	19.	0.51
NITROGEN	121710.	LOSS	29.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LONG LAKE OUTLET	5.5	295.3	0.007	0.340	5.	267.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MASSACHUSETTS

NAME - HAGER POND (HYPEREUTROPHIC)
COUNTY - MIDDLESEX
STORET NO. - 2502 WORKING PAPER NO. 220. NTIS ACCESSION NO. PB-240 913/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	4.40	0.10	1.5	0.1	24.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
25.	419.	0.4	1.525	0.482	7.355	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
198.5	**********	(5/ 3/72) P	(8/ 4/72) P	(10/ 6/72) P

SUMMARY OF PHYTOPLANKTON DATA
10/ 6/72

GENERA	COUNT
SCENEDESMUS	22256
PEDIASTRUM	7068
CYCLOTELLA	2481
DINOBRYON	301
NAVICULA	226
OTHER	751
TOTAL	33083

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	12980.	**********	**********	118.	13098.
NITROGEN	54485.	**********	**********	3565.	58050.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3510.	73.	129.46
NITROGEN	26771.	54.	573.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED BROOK (A-1)	0.040	2.3	2.102	17.700	27.	856.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MASSACHUSETTS

NAME - HARRIS POND (EUTROPHIC)
COUNTY - PROVIDENCE, (RI) WORCHESTER, (MA)
STORET NO. - 2503 WORKING PAPER NO. 27, NTIS ACCESSION NO. PB-239 546/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	85.73	0.36	2.4	1.6	6.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
12.	110.	0.8	0.052	0.023	0.410	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
12.9	7.5	(6/ 4/72) P	(8/ 1/72) N	(10/ 6/72) P

SUMMARY OF PHYTOPLANKTON DATA
10/ 6/72

GENERA	COUNT
FRAGILARIA	2415
MELOSIRA	1509
DICTYOSPHAERIUM	1472
FLAGELLATES	1207
CYCLOTELLA	1019
OTHER	3586
TOTAL	11208

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2444.	503.	**********	912.	3859.
NITROGEN	11964.	1202.	**********	30644.	43810.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2522.	35.	10.84
NITROGEN	42376.	3.	123.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MILL RIVER	1.4	74.3	0.086	0.898	11.	362.
QUICK STREAM	0.1	5.7	0.014	0.478	9.	287.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MASSACHUSETTS

NAME - MAYNARD IMPOUNDMENT (EUTROPHIC)
COUNTY - MIDDLESEX
STORET NO. - 2504 WORKING PAPER NO. 219. NTIS ACCESSION NO. PB-242 539/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	292.67	0.32	1.2	4.9	1.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
24.	190.	1.3	0.417	0.356	0.660	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
14.5	41.6	(6/ 2/72) N	(8/ 4/72) N	(10/ 6/72) N

SUMMARY OF PHYTOPLANKTON DATA

8/ 4/72 GENERA	COUNT	10/ 6/72 GENERA	COUNT
FRAGILARIA	7477	FLAGELLATES	844
CYCLOTELLA	2252	CRYPTOMONAS	136
COCCONEIS	1441	SYNEDRA	106
NAVICULA	1441	CYCLOTELLA	98
MELOSIRA	1171	NAVICULA	98
OTHER	5317	OTHER	465
TOTAL	19099	TOTAL	1711

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	29438.	**********	**********	2585.	32023.
NITROGEN	86204.	**********	**********	216308.	302512.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	34354.	LOSS	96.91
NITROGEN	330463.	LOSS	934.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ASSABET RIVER	3.3	199.7	0.162	1.727	4.	665.
ASSABET BROOK	0.9	51.5	0.033	1.778	17.	922.
TAYLOR BROOK	0.2	11.9	0.068	1.362	35.	711.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MASSACHUSETTS

NAME - WOODS POND (HYPEREUTROPHIC)
COUNTY - BERKSHIRE
STORET NO. - 2507

WORKING PAPER NO. 223. NTIS ACCESSION NO. PB-241 815/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	445.48	0.49	1.2	8.8	1.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
110.	295.	1.1	0.363	0.282	1.410	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
11.4	41.8	(6/ 5/72) N	(8/ 1/72) N	(10/ 8/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/ 5/72 GENERA	COUNT	8/ 1/72 GENERA	COUNT
ASTERIONELLA	470	FLAGELLATES	3002
NAVICULA	265	ANABAENA	778
FRAGILARIA	90	DINOBRYON	651
DINOBRYON	72	CYCLOTELLA	380
SYNEDRA	72	SYNEDRA	325
OTHER	429	OTHER	1121
TOTAL	1398	TOTAL	6257

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	62186.	61224.	**********	8379.	131789.
NITROGEN	286635.	**********	**********	393492.	680127.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	100571.	24.	266.93
NITROGEN	939887.	LOSS	1377.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HOUSATONIC RIVER	7.6	380.7	0.401	2.560	19.	883.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MASSACHUSETTS

NAME - MATFIELD IMPOUNDMENT (EUTROPHIC)
COUNTY - PLYMOUTH
STORET NO. - 2508 WORKING PAPER NO. 221. NTIS ACCESSION NO. PB-241 814/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	356.90	0.15	0.9	6.8	0.3

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	180.	0.4	0.535	0.383	2.640	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
2.3	61.4	(6/ 4/72) N	(8/ 1/72) N	(10/ 8/72) N

SUMMARY OF PHYTOPLANKTON DATA

8/ 1/72 GENERA	COUNT	10/ 8/72 GENERA	COUNT
ANABAENA	3840	FLAGELLATES	502
ANACYSTIS(MICROCYSTIS)	2500	CRYPTOMONAS	141
DINOBRYON	159	NAVICULA	90
FLAGELLATES	761	NITZSCHIA	80
SYNEDRA	435	ACHNANTHES	80
OTHER	1725	OTHER	448
TOTAL	9420	TOTAL	1341

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	81342.	**********	**********	44404.	125746.
NITROGEN	354426.	**********	**********	496045.	850472.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	82259.	35.	817.68
NITROGEN	875880.	LOSS	5530.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MATFIELD RIVER	3.8	197.9	0.882	4.905	182.	1347.
TOWN RIVER	3.0	155.9	0.149	2.538	53.	1446.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MASSACHUSETTS

NAME - ROCHDALE POND (EUTROPHIC)
COUNTY - WORCHESTER
STORET NO. - 2509 WORKING PAPER NO. 222. NTIS ACCESSION NO. PB-241 164/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	48.95	0.27	1.8	0.8	4.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
10.	153.	1.1	0.063	0.027	0.150	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
14.4	5.5	(6/ 4/72) N	(8/ 4/72) N	(10/ 6/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/ 4/72 GENERA	COUNT	8/ 4/72 GENERA	COUNT	10/ 6/72 GENERA	COUNT
SCENEDESMUS	226	DICTYOSPHAERIUM	831	SCENEDESMUS	1175
ASTERIONELLA	226	DINOBRYON	831	FLAGELLATES	331
SYNEDRA	93	GLOEOCAPSA	145	DINOBRYON	316
FRAGILARIA	75	SCENEDESMUS	136	FRAGILARIA	271
NITZSCHIA	69	CYCLOTELLA	118	ASTERIONELLA	184
OTHER	218	OTHER	-45	OTHER	1051
TOTAL	907	TOTAL	2016	TOTAL	3328

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	113.	**********	**********	1143.	1256.
NITROGEN	635.	**********	**********	30281.	30916.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1569.	LOSS	7.57
NITROGEN	25374.	18.	186.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
FRENCH RIVER	0.6	36.3	0.057	1.086	25.	515.
GRINDSTONE BROOK	0.099	6.5	0.029	1.933	14.	936.
UNNAMED TRIBUTARY (E-1)	0.028	1.8	0.098	1.632	50.	823.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MASSACHUSETTS

NAME - BILLERICA IMPOUNDMENT (EUTROPHIC)
COUNTY - MIDDLESEX
STORET NO. - 2511 WORKING PAPER NO. 219, NTIS ACCESSION NO. PB-242 539/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	714.84	0.10	2.1	15.3	0.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
23.	205.	1.0	0.181	0.128	0.395	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
12.2	13.1	(6/ 8/72) N	(8/ 4/72) N	(10/ 6/72) N

SUMMARY OF PHYTOPLANKTON DATA

8/ 4/72 GENERA	COUNT	10/ 6/72 GENERA	COUNT
CHROOCOCCUS	1285	STICHOCOCCUS	32406
DINOBRYON	321	FLAGELLATES	451
MELOSIRA	281	SCENEDESMUS	451
SCHROEDERIA	281	FRAGILARIA	301
SCENEDESMUS	251	MELOSIRA	301
OTHER	774	OTHER	1654
TOTAL	3193	TOTAL	35564

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	43787.	**********	**********	28626.	72413.
NITROGEN	136844.	**********	**********	827084.	963927.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	71107.	2.	715.73
NITROGEN	1058984.	LOSS	9527.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CONCORD RIVER	14.3	647.5	0.144	1.969	42.	1181.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MASSACHUSETTS

NAME - NORTHBORO IMPOUNDMENT (EUTROPHIC)
COUNTY - WORCHESTER
STORET NO. - 2512 WORKING PAPER NO. 219. NTIS ACCESSION NO. PB-242 539/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	91.69	0.06	1.2	1.5	0.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	20.	1.1	0.275	0.212	0.600	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
**********	**********	(6/ 3/72) N	(8/ 4/72) N	(10/ 6/72) N

SUMMARY OF PHYTOPLANKTON DATA
6/ 3/72

GENERA	COUNT
CYCLOTELLA	9699
FRAGILARIA	4436
MELOSIRA	3684
NAVICULA	1654
COCCONEIS	1654
OTHER	3911
TOTAL	25038

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	28118.	**********	**********	4272.	24390.
NITROGEN	42254.	**********	**********	72050.	114304.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	24313.	0.	401.78
NITROGEN	123098.	LOSS	1883.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ASSABET RIVER	0.9	52.6	0.865	3.068	70.	806.
COLD HARBOR BROOK	0.4	25.1	0.028	1.427	15.	757.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MASSACHUSETTS

NAME - HUDSON IMPOUNDMENT (EUTHOPHIC)
COUNTY - MIDDLESEX, WORCHESTER
STORET NO. - 2513 WORKING PAPER NO. 219. NTIS ACCESSION NO. PB-242 539/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	188.29	0.12	1.2	3.1	0.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
20.	220.	1.4	0.476	0.416	1.310	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
7.6	69.9	(6/ 2/72) N	(8/ 4/72) N	(10/ 6/72) N

SUMMARY OF PHYTOPLANKTON DATA

8/ 4/72 GENERA	COUNT	10/ 6/72 GENERA	COUNT
CYCLOTELLA	38	FLAGELLATES	294
SYNEDRA	33	ANACYSTIS(MICROCYSTIS)	279
NAVICULA	20	CRYPTOMONAS	136
SCENEDESMUS	18	ANABAENA	136
COCCONEIS	16	FRAGILARIA	83
OTHER	81	OTHER	617
TOTAL	206	TOTAL	1545

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	25134.	**********	**********	5039.	30172.
NITROGEN	54880.	**********	**********	139587.	194467.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	23543.	22.	248.52
NITROGEN	218975.	LOSS	1601.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ASSABET RIVER	2.6	157.0	0.303	2.166	29.	821.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - HOLLOWAY RESERVOIR (EUTROPHIC)
COUNTY - GENESSEE, LAPEER
STORET NO. - 26A0 WORKING PAPER NO. 197, NTIS ACCESSION NO. PB-240 909/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	1362.34	3.86	******	7.1	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
220.	575.	1.5	0.057	0.032	0.580	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
10.7	2.4	(6/17/72) N	(9/19/72) P	(11/15/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/17/72 GENERA	COUNT	9/19/72 GENERA	COUNT	11/15/72 GENERA	COUNT
CYCLOTELLA	579	ANACYSTIS(MICROCYSTIS)	2952	ASTERIONELLA	1392
SCHROEDERIA	434	ANABAENA	1958	PHACUS	443
DINOBRYON	410	FLAGELLATES	331	MELOSIRA	325
NAVICULA	302	MELOSIRA	271	RAPHIDIOPSIS	154
ANABAENA	241	DINOBRYON	181	DINOBRYON	145
OTHER	712	OTHER	753	OTHER	669
TOTAL	2678	TOTAL	6446	TOTAL	3128

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	7642.	**********	23.	17478.	25143.
NITROGEN	27542.	**********	798.	452576.	480916.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	16132.	36.	6.51
NITROGEN	486340.	LOSS	124.6

V. NON-POINT SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
FLINT RIVER	6.0	1160.3	0.088	2.239	14.	334.
HEMMINGWAY & WHIPPLE DRN	0.1	20.7	0.032	1.605	5.	275.
MASLEW CREEK	0.4	73.3	0.038	1.827	7.	313.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - CARO RESERVOIR (EUTROPHIC)
COUNTY - TUSCOLA
STORET NO. - 2641 WORKING PAPER NO. 190, NTIS ACCESSION NO. PB-240 912/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	1649.83	0.81	******	8.9	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
238.	650.	0.7	0.108	0.029	1.600	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
12.0	**********	(6/17/72) P	(9/19/72) N	(11/15/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/17/72 GENERA	COUNT	9/19/72 GENERA	COUNT	11/15/72 GENERA	COUNT
STEPHANODISCUS	679	FLAGELLATES	2620	RAPHIDIOPSIS	1386
NAVICULA	622	CYCLOTELLA	2440	LYNGBYA	301
MELOSIRA	283	LAGERHEIMIA	723	NAVICULA	36
SYNEDRA	181	CRYPTOMONAS	602	OSCILLATORIA	24
NITZSCHIA	113	MICRACTINIUM	331	ACHNANTHES	6
OTHER	577	OTHER	874	OTHER	31
TOTAL	2455	TOTAL	7590	TOTAL	1784

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	8095.	**********	**********	19120.	27215.
NITROGEN	20662.	**********	**********	906023.	926685.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	33129.	LOSS	33.62
NITROGEN	983184.	LOSS	1144.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CASS RIVER	8.6	1585.1	0.080	3.252	12.	545.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - BOARDMAN HYDRO POND (OLIGOTROPHIC)
COUNTY - GRAND TRAVERSE
STORET NO. - 26A2 WORKING PAPER NO. 186. NTIS ACCESSION NO. PB-240 900/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	**********	0.31	7.6	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
153.	308.	3.5	0.008	0.004	0.280	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/17/72) P	(9/15/72) P	(11/12/72) P
1.3	0.1			

SUMMARY OF PHYTOPLANKTON DATA

6/17/72 GENERA	COUNT	9/15/72 GENERA	COUNT	11/12/72 GENERA	COUNT
DINOBRYON	157	DINOBRYON	177	ACHNANTHES	80
COCCONEIS	132	ACHNANTHES	170	NAVICULA	65
ACHNANTHES	103	NAVICULA	112	CYMBELLA	38
NAVICULA	52	FRAGILARIA	90	COCCONEIS	29
SYNEDRA	49	CYMBELLA	69	SYNEDRA	29
OTHER	118	OTHER	293	OTHER	53
TOTAL	611	TOTAL	911	TOTAL	294

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - LAKE ALLEGAN (EUTROPHIC)
COUNTY - ALLEGAN
STORET NO. - 2603 WORKING PAPER NO. 182. NTIS ACCESSION NO. PB-240 823/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	3991.19	6.42	3.4	35.7	7.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
223.	600.	0.7	0.135	0.061	1.020	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
20.3	**********	(6/14/72) N	(9/18/72) P	(11/14/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/14/72 GENERA	COUNT	9/18/72 GENERA	COUNT	11/14/72 GENERA	COUNT
CYCLOTELLA	14891	CYCLOTELLA	2509	LYNGBYA	2857
MELOSIRA	1594	MELOSIRA	1386	CYCLOTELLA	1230
SYNEDRA	1232	SCENEDESMUS	813	SYNEDRA	597
GLOEOCAPSA	326	ACHNANTHES	241	MELOSIRA	488
NITZSCHIA	290	SYNEDRA	241	ACHNANTHES	362
OTHER	1413	OTHER	1196	OTHER	741
TOTAL	19746	TOTAL	6386	TOTAL	6275

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	46989.	**********	**********	154522.	201510.
NITROGEN	756671.	**********	**********	1831984.	2588655.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	154177.	23.	31.40
NITROGEN	3120462.	LOSS	403.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
KALAMAZOO RIVER	35.1	3918.7	0.174	2.420	39.	459.
DUMONT CREEK	0.3	37.3	0.034	1.300	10.	375.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - BARTON LAKE (EUTROPHIC)
COUNTY - KALAMAZOO
STORET NO. - 2606 WORKING PAPER NO. 183, NTIS ACCESSION NO. PB-240 825/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	129.24	1.40	6.1	1.2	81.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
169.	400.	1.1	0.061	0.031	0.985	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
27.8	3.3	(6/13/72) P	(9/17/72) P	(11/12/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/13/72 GENERA	COUNT	9/17/72 GENERA	COUNT	11/12/72 GENERA	COUNT
FRAGILARIA	476	ANABAENA	2651	ASTERIONELLA	1022
MELOSIRA	301	MELOSIRA	904	MELOSIRA	542
OSCILLATORIA	259	FLAGELLATES	281	FRAGILARIA	289
SYNEDRA	169	LYNGBYA	221	STEPHANODISCUS	126
TABELLARIA	84	FRAGILARIA	100	ANABAENA	118
OTHER	164	OTHER	160	OTHER	28
TOTAL	1453	TOTAL	4317	TOTAL	2125

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1986.	**********	36.	989.	3011.
NITROGEN	4975.	**********	1293.	41596.	47864.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2984.	1.	2.14
NITROGEN	70925.	LOSS	34.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
PORTAGE CREEK	0.9	90.6	0.026	0.792	8.	240.
TUB LAKE OUTLET	0.085	8.8	0.020	2.382	6.	646.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - BELLEVILLE LAKE (EUTROPHIC)
COUNTY - WAYNE
STORET NO. - 2609 WORKING PAPER NO. 184. NTIS ACCESSION NO. PB-240 227/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	2157.47	5.14	6.1	14.4	25.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
172.	540.	0.9	0.122	0.060	1.110	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
28.3	**********	(6/16/72) N	(9/19/72) N	(11/13/72) P

SUMMARY OF PHYTOPLANKTON DATA

9/19/72 GENERA	COUNT	11/13/72 GENERA	COUNT
MELOSIRA	4525	ANABAENA	1105
SCENEDESMUS	1719	CHROOCOCCUS	704
ANACYSTIS(MICROCYSTIS)	1086	STEPHANODISCUS	704
OSCILLATORIA	995	CYCLOTELLA	578
STEPHANODISCUS	950	SYNEDRA	578
OTHER	2716	OTHER	3065
TOTAL	11991	TOTAL	6734

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	75846.	**********	100.	4980.	80925.
NITROGEN	485760.	**********	3633.	630775.	1120167.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	60807.	25.	15.75
NITROGEN	1236322.	LOSS	217.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HURON RIVER	14.1	2108.3	0.121	2.161	2.	284.
WILLOW RUN CREEK	0.1	16.3	1.483	8.303	8.	346.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - BETSIE LAKE (EUTROPHIC)
COUNTY - BENZIE
STORET NO. - 2610 WORKING PAPER NO. 185. NTIS ACCESSION NO. PB-241 163/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	634.55	1.01	******	9.9	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
145.	304.	1.0	0.026	0.009	0.175	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
4.6	3.5	(6/17/72) P	(9/15/72) P	(11/12/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/17/72 GENERA	COUNT	9/15/72 GENERA	COUNT	11/12/72 GENERA	COUNT
NAVICULA	624	MELOSIRA	8225	ANABAENA	11392
COCCONEIS	461	MELOSIRA	4094	RAPHIDIOPSIS	7722
ACHNANTHES	380	ANACYSTIS(MICROCYSTIS)	435	LYNGBYA	1519
SYNEDRA	262	DINOBRYON	326	FRAGILARIA	90
CYMBELLA	244	SYNEDRA	217	MELOSIRA	54
OTHER	760	OTHER	616	OTHER	199
TOTAL	2731	TOTAL	13913	TOTAL	20976

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	5986.	**********	**********	6544.	12531.
NITROGEN	17995.	**********	**********	299986.	317982.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	10685.	15.	12.39
NITROGEN	266934.	16.	314.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BETSIE RIVER	9.8	626.8	0.021	0.963	10.	472.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - BRIGHTON LAKE (EUTROPHIC)
COUNTY - LIVINGSTON
STORET NO. - 2613 WORKING PAPER NO. 187, NTIS ACCESSION NO. PB-240 899/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	61.12	2.43	******	0.4	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
188.	520.	1.1	0.620	0.220	0.480	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
44.2	2.4	(6/15/72) N	(9/20/72) N	(11/15/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/15/72 GENERA	COUNT	9/20/72 GENERA	COUNT	11/15/72 GENERA	COUNT
FRAGILARIA	4985	OSCILLATORIA	2242	FLAGELLATES	344
SCENEDESMUS	3328	ANACYSTIS(MICROCYSTIS)	705	CHROOCOCCUS	72
ASTERIONELLA	1205	MELOSIRA	705	DINOBRYON	58
DINOBRYON	1024	APHANOCAPSA	633	CRYPTOMONAS	51
OOCYSTIS	994	FRAGILARIA	434	CRUCIGENIA	36
OTHER	1310	OTHER	1212	OTHER	242
TOTAL	12846	TOTAL	5931	TOTAL	803

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	580.	**********	27.	367.	975.
NITROGEN	8431.	**********	961.	14707.	24100.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1542.	LOSS	0.40
NITROGEN	15828.	34.	9.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ORE CREEK	0.3	57.2	0.029	1.076	6.	206.

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN MICHIGAN

NAME - LAKE CHARLEVOIX (OLIGOTROPHIC)
COUNTY - CHARLEVOIX
STORET NO. - 2617 WORKING PAPER NO. 188. NTIS ACCESSION NO. PB-240 229/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	854.70	69.85	16.8	11.5	3.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
130.	285.	3.8	0.006	0.004	0.210	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
3.0	0.1	(6/16/72) P	(9/14/72) P	(11/12/72) P

SUMMARY OF PHYTOPLANKTON DATA

9/14/72 GENERA	COUNT	11/12/72 GENERA	COUNT
DINOBRYON	502	LYNGBYA	99
FRAGILARIA	221	DINOBRYON	85
MELOSIRA	201	FRAGILARIA	72
ANACYSTIS(MICROCYSTIS)	116	ASTERIONELLA	54
DINOBRYON	90	SYNEDRA	20
OTHER	266	OTHER	108
TOTAL	1396	TOTAL	438

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1211.	**********	231.	7138.	8580.
NITROGEN	8077.	**********	8667.	642081.	658825.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3138.	63.	0.12
NITROGEN	344363.	48.	9.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HORTON CREEK	0.5	30.6	0.009	1.947	5.	1078.
BOYNE RIVER	3.4	181.0	0.012	0.868	7.	512.
PORTER CREEK	0.5	45.1	0.012	1.436	5.	531.
JORDAN RIVER	5.3	202.5	0.014	1.199	12.	1000.
MONROE CREEK	0.3	25.1	0.014	1.040	5.	393.
LOEB CREEK	0.2	14.8	0.012	1.318	4.	460.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - LAKE CHEMUNG (EUTROPHIC)
COUNTY - LIVINGSTON
STORET NO. - 2618 WORKING PAPER NO. 189. NTIS ACCESSION NO. PB-240 230/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	13.99	1.25	8.5	0.1	4.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
137.	410.	2.4	0.032	0.013	0.140	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/15/72) N	(9/19/72) P	(11/15/72) N
13.5	2.7			

SUMMARY OF PHYTOPLANKTON DATA

6/15/72 GENERA	COUNT	9/19/72 GENERA	COUNT	11/15/72 GENERA	COUNT
DINOBRYON	1304	ANACYSTIS(MICROCYSTIS)	1236	LYNGBYA	2132
OOCYSTIS	407	OSCILLATORIA	1034	OSCILLATORIA	675
GLOEOCAPSA	347	ANABAENA	672	DINOBRYON	229
OSCILLATORIA	113	LYNGBYA	427	ANACYSTIS(MICROCYSTIS)	193
MELOSIRA	98	APHANOCAPSA	383	ANABAENA	157
OTHER	361	OTHER	709	OTHER	613
TOTAL	2630	TOTAL	4461	TOTAL	3999

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	141.	132.	272.
NITROGEN	**********	**********	5224.	6508.	11732.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	100.	63.	0.22
NITROGEN	3610.	69.	9.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED CREEK (01)	0.025	4.1	0.046	2.197	9.	406.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - CONSTANTINE RESERVOIR (EUTROPHIC)
COUNTY - ST. JOSEPH
STORET NO. - 2621 WORKING PAPER NO. 218. NTIS ACCESSION NO. PB-248 946/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	**********	2.25	******	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
193.	500.	3.1	0.048	0.020	0.410	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
39.3	8.7	(9/17/72) N	(11/12/72) P

SUMMARY OF PHYTOPLANKTON DATA

9/17/72 GENERA	COUNT	11/12/72 GENERA	COUNT
LYNGBYA	6847	CYCLOTELLA	1501
MELOSIRA	5586	MELOSIRA	226
RAPHIDIOPSIS	1532	STEPHANODISCUS	126
SCENEDESMUS	991	ASTERIONELLA	127
SYNEDRA	901	ACHNANTHES	115
OTHER	7747	OTHER	608
TOTAL	23604	TOTAL	2703

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - DEER LAKE (EUTROPHIC)
COUNTY - MARQUETTE
STORET NO. - 2624 WORKING PAPER NO. 192. NTIS ACCESSION NO. PB-242 109/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	94.02	3.63	******	1.1	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
57.	220.	1.5	0.244	0.212	0.120	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
		(6/24/72) N	(9/10/72) N
22.7	**********		

SUMMARY OF PHYTOPLANKTON DATA

6/24/72 GENERA	COUNT	9/10/72 GENERA	COUNT
FRAGILARIA	4955	ANACYSTIS(MICROCYSTIS)	226
ANACYSTIS(MICROCYSTIS)	362	MELOSIRA	206
CYCLOTELLA	344	DINOBRYON	186
CRYPTOMONAS	127	CYCLOTELLA	116
ANABAENA	96	FLAGELLATES	105
OTHER	270	OTHER	467
TOTAL	6148	TOTAL	1306

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	7238.	**********	**********	1320.	8558.
NITROGEN	31333.	**********	**********	56608.	87941.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	7819.	9.	2.36
NITROGEN	66635.	24.	24.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CARP CREEK	0.8	62.2	0.329	2.762	18.	618.
GOLD MINE CREEK	0.2	12.7	0.013	1.178	6.	507.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - FORD LAKE (EUTROPHIC)
COUNTY - WASHTENAW
STORET NO. - 2629 WORKING PAPER NO. 193. NTIS ACCESSION NO. PB-240 232/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	2108.26	4.25	4.4	14.1	15.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
187.	538.	1.1	0.111	0.063	1.160	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (MG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
14.9	**********	(6/16/72) N	(9/19/72) N	(11/13/72) P

SUMMARY OF PHYTOPLANKTON DATA

9/19/72 GENERA	COUNT	11/13/72 GENERA	COUNT
ANABAENA	2981	CYCLOTELLA	275
FLAGELLATES	1660	STEPHANODISCUS	166
LYNGBYA	1132	MELOSIRA	137
STEPHANODISCUS	566	NAVICULA	137
CRYPTOMONAS	415	RAPHIDIOPSIS	137
OTHER	2680	OTHER	804
TOTAL	9434	TOTAL	1656

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	63474.	**********	**********	5211.	68685.
NITROGEN	436209.	**********	**********	681184.	1117392.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	55683.	19.	16.16
NITROGEN	983030.	12.	263.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HURON RIVER	14.0	2095.3	0.082	2.296	2.	319.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - FREMONT LAKE (HYPEREUTROPHIC)
COUNTY - NEWAYGO
STORET NO. - 2631 WORKING PAPER NO. 194. NTIS ACCESSION NO. PB-240 925/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	52.58	3.20	10.1	0.5	1.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
162.	480.	1.5	0.378	0.344	1.460	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
28.5	44.0	(6/13/72) N	(9/15/72) N	(11/13/72) N

SUMMARY OF PHYTOPLANKTON DATA

9/15/72 GENERA	COUNT	11/13/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	2080	ANACYSTIS(MICROCYSTIS)	296
ANABAENA	669	STEPHANODISCUS	209
DINOBRYON	434	OOCYSTIS	202
FLAGELLATES	253	STAURASTRUM	195
CRYPTOMONAS	217	SCENEDESMUS	188
OTHER	1139	OTHER	848
TOTAL	4792	TOTAL	1938

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	4023.	**********	27.	5447.	9497.
NITROGEN	11238.	**********	1066.	40209.	52512.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	5020.	47.	2.97
NITROGEN	38154.	27.	16.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
DAISY CREEK	0.4	33.7	0.783	3.463	135.	798.
UNNAMED CREEK (#1)	0.042	4.1	0.191	2.089	54.	627.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - JORDAN LAKE (EUTROPHIC)
COUNTY - IONIA, BARRY
STORET NO. - 2640 WORKING PAPER NO. 198, NTIS ACCESSION NO. PB-241 185/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	66.82	1.74	7.3	0.5	304.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
162.	425.	1.8	0.171	0.138	1.960	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
20.5	22.2	(6/15/72) P	(9/18/72) N	(11/15/72) P

SUMMARY OF PHYTOPLANKTON DATA

9/18/72 GENERA	COUNT	11/15/72 GENERA	COUNT
MERISMOPEDIA	1887	ASTERIONELLA	217
MARSSONIELLA	1094	FRAGILARIA	190
APHANOCAPSA	1019	FLAGELLATES	136
ANACYSTIS(MICROCYSTIS)	868	ANABAENA	131
FRAGILARIA	604	STEPHANODISCUS	118
OTHER	2641	OTHER	288
TOTAL	8113	TOTAL	1080

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	272.	**********	27.	1692.	1991.
NITROGEN	4308.	**********	1066.	45574.	50948.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1660.	17.	1.14
NITROGEN	40082.	21.	29.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
TUPPER CREEK	0.4	47.4	0.114	3.132	26.	672.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - KENT LAKE (EUTROPHIC)
COUNTY - OAKLAND, LIVINGSTON
STORET NO. - 2643 WORKING PAPER NO. 199. NTIS ACCESSION NO. PB-240 796/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	383.32	4.05	2.0	2.8	33.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
184.	520.	1.1	0.043	0.180	0.355	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
33.9	**********	(6/15/72) N (9/20/72) N (11/13/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/15/72 GENERA	COUNT	9/20/72 GENERA	COUNT	11/13/72 GENERA	COUNT
MELOSIRA	3007	ANACYSTIS(MICROCYSTIS)	4932	ASTERIONELLA	5940
COCCONEIS	2174	ANABAENA	1900	FLAGELLATES	4210
FRAGILARIA	761	MELOSIRA	679	FRAGILARIA	1053
PEDIASTRUM	725	DINOBRYON	317	DINOBRYON	1053
STEPHANODISCUS	543	FLAGELLATES	271	SYNEDRA	526
OTHER	2935	OTHER	634	OTHER	2030
TOTAL	10145	TOTAL	8733	TOTAL	14812

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3460.	**********	**********	2961.	6422.
NITROGEN	17918.	**********	**********	72939.	90857.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	4925.	23.	1.59
NITROGEN	97887.	LOSS	22.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HURON RIVER	2.6	347.1	0.074	0.945	8.	173.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - MACATAWA LAKE (HYPEREUTROPHIC)
COUNTY - OTTAWA
STORET NO. - 2648 WORKING PAPER NO. 200. NTIS ACCESSION NO. PB-242 548/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	463.61	7.20	3.7	3.9	77.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
132.	480.	0.6	0.159	0.068	1.280	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
25.6	**********	(6/14/72) P	(9/18/72) P	(11/14/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/14/72 GENERA	COUNT	9/18/72 GENERA	COUNT	11/14/72 GENERA	COUNT
SCENEDESMUS	1049	ANABAENA	1683	RAPHIDIOPSIS	1564
CRYPTOMONAS	850	STEPHANODISCUS	1683	CYCLOTELLA	217
ASTERIONELLA	687	SCENEDESMUS	980	SCENEDESMUS	172
PEDIASTRUM	597	MELOSIRA	553	MELOSIRA	163
MELOSIRA	488	ANACYSTIS(MICROCYSTIS)	377	SYNEDRA	72
OTHER	1302	OTHER	1885	OTHER	497
TOTAL	4973	TOTAL	7161	TOTAL	2685

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	25098.	**********	86.	20522.	45705.
NITROGEN	82417.	**********	3197.	372131.	457746.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	12472.	73.	6.34
NITROGEN	263977.	42.	63.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BLACK RIVER	2.9	347.1	0.316	3.463	53.	853.
PINE CREEK	0.4	46.6	0.076	2.534	20.	625.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - MANISTEE LAKE (EUTROPHIC)
COUNTY - MANISTEE
STORET NO. - 2649 WORKING PAPER NO. 201. NTIS ACCESSION NO. PB-240 927/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	5319.86	3.76	******	62.4	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
151.	580.	1.2	0.024	0.012	0.200	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
6.3	**********	(6/17/72) N	(9/15/72) N	(11/13/72) P

SUMMARY OF PHYTOPLANKTON DATA

9/15/72 GENERA	COUNT	11/13/72 GENERA	COUNT
MELOSIRA	2405	CHROOCOCCUS	3367
ANACYSTIS(MICROCYSTIS)	1320	FLAGELLATES	2312
DINOBRYON	253	FRAGILARIA	2111
DINOBRYON	108	ANABAENA	1055
FLAGELLATES	72	CRYPTOMONAS	955
OTHER	489	OTHER	4773
TOTAL	4647	TOTAL	14573

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	5923.	**********	385.	44934.	51243.
NITROGEN	26472.	**********	14494.	1140247.	1181212.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	42948.	16.	13.63
NITROGEN	1464870.	LOSS	314.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MANISTEE RIVER	56.6	4713.8	0.023	0.595	9.	227.
LITTLE MANISTEE RIVER	5.3	564.6	0.017	0.465	5.	110.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - MUSKEGON LAKE (EUTROPHIC)
COUNTY - MUSKEGON
STORET NO. - 2659 WORKING PAPER NO. 203. NTIS ACCESSION NO. PB-240 926/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	6822.05	16.79	7.0	60.7	23.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
131.	340.	1.6	0.065	0.048	0.340	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
9.5	7.3	(6/13/72) N	(9/19/72) N	(11/14/72) N

SUMMARY OF PHYTOPLANKTON DATA

9/19/72 GENERA	COUNT	11/14/72 GENERA	COUNT
MELOSIRA	1525	LYNGBYA	350
ANABAENA	506	CYCLOTELLA	187
FLAGELLATES	145	MELOSIRA	181
STEPHANODISCUS	145	ANKISTRODESMUS	102
MARSSONIELLA	126	FLAGELLATES	96
OTHER	597	OTHER	482
TOTAL	3044	TOTAL	1398

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	40562.	**********	45.	74544.	115152.
NITROGEN	121673.	**********	1646.	1738363.	1861682.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	113692.	1.	6.86
NITROGEN	1788122.	4.	110.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MUSKEGON RIVER	58.9	6648.5	0.037	0.957	10.	248.
GREEN CREEK	0.3	30.3	0.033	1.171	10.	369.
BEAR LAKE OUTLET	0.8	74.1	0.058	1.965	21.	450.
FOUR MILE CREEK	0.088	8.8	0.294	1.539	87.	469.
RYRESON CREEK	0.2	19.7	0.164	2.602	56.	862.
RUDDIMAN CREEK	0.088	8.8	0.182	2.245	70.	794.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - PENTWATER LAKE (EUTROPHIC)
COUNTY - OCEANA
STORET NO. - 2665 WORKING PAPER NO. 284. NTIS ACCESSION NO. PB-240 928/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	458.43	1.76	******	6.5	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
143.	330.	1.8	0.027	0.013	0.480	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
16.1	8.6	(6/17/72) P	(9/18/72) P	(11/13/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/17/72 GENERA	COUNT	9/18/72 GENERA	COUNT	11/13/72 GENERA	COUNT
CRYPTOMONAS	1665	MELOSIRA	784	FLAGELLATES	1220
ANABAENA	567	FRAGILARIA	494	CYCLOTELLA	587
FRAGILARIA	543	ANABAENA	410	MELOSIRA	407
DINOBRYON	302	MARSSONIELLA	307	ASTERIONELLA	361
CHROOCOCCUS	96	SYNEDRA	175	ULOTHRIX	241
OTHER	313	OTHER	880	OTHER	783
TOTAL	3486	TOTAL	3050	TOTAL	3599

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2095.	**********	27.	6626.	8748.
NITROGEN	9197.	**********	971.	309025.	319193.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	7737.	12.	4.97
NITROGEN	200678.	37.	181.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
PENTWATER RIVER	6.2	435.1	0.037	1.539	14.	682.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - PORTAGE LAKE (MESOTROPHIC)
COUNTY - HOUGHTON
STORET NO. - 2669 WORKING PAPER NO. 206. NTIS ACCESSION NO. PB-240 824/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	2566.69	44.39	******	31.9	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
44.	128.	2.3	0.013	0.008	0.160	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
		(6/25/72) P	(9/10/72) P
4.7	**********		

SUMMARY OF PHYTOPLANKTON DATA

6/25/72 GENERA	COUNT	9/10/72 GENERA	COUNT
CRYPTOMONAS	535	DINOBRYON	752
ASTERIONELLA	499	ANACYSTIS(MICROCYSTIS)	644
SCENEDESMUS	383	ATTEYA	484
FRAGILARIA	369	CRYPTOMONAS	80
DINOBRYON	333	ANABAENA	72
OTHER	123	OTHER	463
TOTAL	2242	TOTAL	2495

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	11468.	**********	141.	30789.	42390.
NITROGEN	28834.	**********	5274.	1001456.	1035565.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	16086.	62.	0.95
NITROGEN	812277.	22.	23.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
STURGEON RIVER	23.4	1885.5	0.034	1.057	13.	349.
PIKE RIVER	0.6	45.1	0.056	1.437	23.	589.
PILGRIM RIVER	0.8	59.1	0.041	1.056	17.	433.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - ROGERS POND (EUTROPHIC)
COUNTY - MECOSTA
STORET NO. - 2672 WORKING PAPER NO. 208. NTIS ACCESSION NO. PB-240 924/AB

I. MORPHOMETRY

	LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
	IMPOUNDMENT	4804.45	2.07	******	39.5	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
151.	353.	1.7	0.031	0.018	0.120	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/14/72) N	(9/18/72) N	(11/13/72) N
8.1	**********			

SUMMARY OF PHYTOPLANKTON DATA

	9/18/72		11/13/72	
GENERA	COUNT	GENERA	COUNT	
SYNEDRA	2296	MELOSIRA	642	
CYCLOTELLA	2043	FRAGILARIA	291	
STEPHANODISCUS	416	DINOBRYON	181	
FRAGILARIA	380	FLAGELLATES	161	
DINOBRYON	163	CYCLOTELLA	141	
OTHER	651	OTHER	592	
TOTAL	5949	TOTAL	2008	

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	8549.	**********	50.	44363.	52961.
NITROGEN	52753.	**********	1814.	1219273.	1273839.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	45642.	14.	25.61
NITROGEN	1176902.	8.	616.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MUSKEGON RIVER	38.7	4713.8	0.043	1.022	9.	253.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - ROSS RESERVOIR (EUTROPHIC)
COUNTY - GLADWIN
STORET NO. - 2673 WORKING PAPER NO. 209. NTIS ACCESSION NO. PB-240 898/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1261.33	1.19	1.5	10.1	2.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
199.	510.	0.9	0.035	0.020	0.220	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
10.4	**********	(6/14/72) N	(9/20/72) N	(11/14/72) P

SUMMARY OF PHYTOPLANKTON DATA

9/20/72 GENERA	COUNT	11/14/72 GENERA	COUNT
DINOBRYON	1121	FLAGELLATES	187
FLAGELLATES	850	NAVICULA	163
CRYPTOMONAS	615	CYMBELLA	151
MELOSIRA	307	ACHNANTHES	139
FRAGILARIA	271	DINOBRYON	84
OTHER	670	OTHER	494
TOTAL	3834	TOTAL	1218

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3179.	**********	**********	17070.	20249.
NITROGEN	11610.	**********	**********	423900.	435510.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	17333.	14.	17.02
NITROGEN	401347.	8.	366.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
S BRANCH TOBACCO RIVER	3.2	406.6	0.087	1.225	22.	308.
M BRANCH TOBACCO RIVER	0.9	89.4	0.046	1.327	14.	421.
N BRANCH TOBACCO RIVER	2.1	190.9	0.030	0.959	11.	340.
CEDAR RIVER	2.9	313.4	0.042	1.246	2.	327.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - SANFORD LAKE (EUTROPHIC)
COUNTY - MIDLAND
STORET NO. - 2674 WORKING PAPER NO. 210. NTIS ACCESSION NO. PB-240 234/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	2698.78	5.06	3.0	18.6	9.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
143.	420.	1.0	0.018	0.010	0.160	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
13.8	**********	(6/14/72) N	(9/17/72) N	(11/14/72) P

SUMMARY OF PHYTOPLANKTON DATA

9/20/72 GENERA	COUNT	11/14/72 GENERA	COUNT
ANABAENA	1772	FRAGILARIA	909
DINOBRYON	1483	ASTERIONELLA	321
FLAGELLATES	1374	DINOBRYON	298
MELOSIRA	579	CRYPTOMONAS	68
CYCLOTELLA	506	SYNEDRA	48
OTHER	1519	OTHER	126
TOTAL	7233	TOTAL	1770

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	36.	19791.	19828.
NITROGEN	**********	**********	1279.	713660.	714939.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	20639.	LOSS	3.92
NITROGEN	711583.	0.	141.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
TITTABOWASSEE RIVER	18.0	2621.1	0.033	1.207	7.	263.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - THORNAPPLE LAKE (EUTROPHIC)
COUNTY - BARRY
STORET NO. - 2683 WORKING PAPER NO. 215. NTIS ACCESSION NO. PB-240 938/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	932.40	1.66	4.3	7.4	11.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
250.	508.	1.4	0.045	0.028	0.475	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
14.7	**********	(8/13/72) N	(9/18/72) N	(11/14/72) P

SUMMARY OF PHYTOPLANKTON DATA

9/18/72 GENERA	COUNT	11/14/72 GENERA	COUNT
LYNGBYA	2620	FLAGELLATES	803
SYNEDRA	1084	APHANOTHECE	582
ANACYSTIS(MICROCYSTIS)	984	RAPHIDIOPSIS	150
FLAGELLATES	632	FRAGILARIA	110
MALLOMONAS	542	DINOBRYON	100
OTHER	2622	OTHER	363
TOTAL	8484	TOTAL	2108

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	998.	**********	27.	14258.	15283.
NITROGEN	3278.	**********	1066.	420816.	425152.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	12068.	21.	9.23
NITROGEN	375660.	12.	256.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
THORNAPPLE RIVER	5.3	673.4	0.065	1.914	15.	477.
MUD CREEK	1.2	149.2	0.077	1.863	20.	479.
BANK CREEK	0.7	87.8	0.043	1.011	11.	255.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - UNION LAKE (EUTROPHIC)
COUNTY - BRANCH
STORET NO. - 2685 WORKING PAPER NO. 216. NTIS ACCESSION NO. PB-241 177/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	1383.06	2.12	0.9	10.7	2.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
202.	500.	1.1	0.047	0.022	0.440	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
15.7	2.7	(6/14/72) P	(9/16/72) P	(11/12/72) P

SUMMARY OF PHYTOPLANKTON DATA

9/16/72 GENERA	COUNT	11/12/72 GENERA	COUNT
ANABAENA	11114	DINOBRYON	1407
SYNEDRA	858	FLAGELLATES	1306
CYCLOTELLA	813	FRAGILARIA	754
SCENEDESMUS	452	CYCLOTELLA	578
ANACYSTIS(MICROCYSTIS)	422	KIRCHNERIELLA	327
OTHER	2124	OTHER	2412
TOTAL	15783	TOTAL	6784

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1973.	**********	18.	17696.	19687.
NITROGEN	5918.	**********	649.	644290.	650857.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	17642.	10.	9.27
NITROGEN	643692.	1.	306.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ST. JOSEPH RIVER	10.6	1372.7	0.057	2.147	13.	463.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - WHITE LAKE (EUTROPHIC)
COUNTY - MUSKEGON
STORET NO. - 2688 WORKING PAPER NO. 217, NTIS ACCESSION NO. PB-240 922/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	1318.31	10.40	6.9	14.8	56.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
133.	440.	2.1	0.026	0.018	0.335	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
9.2	**********	(6/13/72) N	(9/18/72) N	(11/14/72) P

SUMMARY OF PHYTOPLANKTON DATA

9/18/72 GENERA	COUNT	11/14/72 GENERA	COUNT
FRAGILARIA	1135	MELOSIRA	1092
MELOSIRA	961	FRAGILARIA	678
ANABAENA	376	SYNEDRA	527
FLAGELLATES	202	APHANOTHECE	282
ANACYSTIS(MICROCYSTIS)	103	CYCLOTELLA	282
OTHER	629	OTHER	1715
TOTAL	3406	TOTAL	4576

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2853.	662.	184.	16961.	20580.
NITROGEN	8553.	31946.	3995.	413234.	457728.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	15977.	22.	1.98
NITROGEN	364050.	20.	44.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WHITE RIVER	14.0	1245.8	0.037	0.869	13.	310.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME = [redacted] LAKE (EUTROPHIC)
COUNTY = MUSKEGON
STORET NO. = 2691 WORKING PAPER NO. 202. NTIS ACCESSION NO. PB-240 212/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	212.64	2.81	4.0	1.7	76.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
114.	440.	1.2	0.369	0.321	0.920	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
27.8	31.6	(6/13/72) N	(9/19/72) N	(11/14/72) N

SUMMARY OF PHYTOPLANKTON DATA

9/19/72 GENERA	COUNT	11/14/72 GENERA	COUNT
SCENEDESMUS	4141	STEPHANODISCUS	4792
ANACYSTIS(MICROCYSTIS)	778	FLAGELLATES	1358
CYCLOTELLA	307	SCENEDESMUS	717
STEPHANODISCUS	289	MELOSIRA	491
DINOBRYON	199	CHROOCOCCUS	415
OTHER	760	OTHER	1246
TOTAL	6474	TOTAL	9019

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	13079.	**********	41.	13964.	27084.
NITROGEN	39236.	**********	1596.	187905.	228739.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	177.	99.	9.63
NITROGEN	6875.	97.	81.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BLACK CREEK (A1)	1.3	159.5	0.209	1.782	73.	620.
BLACK CREEK (A2)	0.1	15.5	0.044	1.883	117.	4542.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - LONG LAKE (EUTROPHIC)
COUNTY - ST JOSEPH
STORET NO. - 2692 WORKING PAPER NO. 211. NTIS ACCESSION NO. PB-240 235/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	193.99	0.85	5.2	1.6	31.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
186.	460.	2.1	0.133	0.117	0.510	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/13/72) N	(9/17/72) N	(11/12/72) N
10.1	17.4			

SUMMARY OF PHYTOPLANKTON DATA

9/17/72 GENERA	COUNT	11/12/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	3219	LYNGBYA	3707
KIRCHNERIELLA	832	ASTERIONELLA	416
LYNGBYA	723	FRAGILARIA	217
OSCILLATORIA	633	SYNEDRA	163
FLAGELLATES	416	CYCLOTELLA	72
OTHER	1681	OTHER	253
TOTAL	7504	TOTAL	4828

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2984.	**********	27.	930.	3941.
NITROGEN	8503.	**********	1066.	64576.	74145.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3578.	9.	4.62
NITROGEN	79370.	LOSS	86.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SWAN CREEK	1.5	183.4	0.074	1.312	4.	311.
LEPLEY LAKE OUTLET	0.025	3.1	0.058	2.481	16.	671.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - ST LOUIS RESERVOIR (EUTROPHIC)
COUNTY - GRATIOT
STORET NO. - 2693 WORKING PAPER NO. 212. NTIS ACCESSION NO. PB-241 151/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	805.49	0.64	******	5.9	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
196.	945.	0.9	0.286	0.880	1.310	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
0.9	25.4	(6/14/72) N	(9/17/72) N	(11/14/72) P

SUMMARY OF PHYTOPLANKTON DATA

9/17/72 GENERA	COUNT	11/14/72 GENERA	COUNT
FRAGILARIA	530	SYNEDRA	137
CYCLOTELLA	458	RAPHIDIOPSIS	128
SYNEDRA	410	LYNGBYA	116
NAVICULA	361	NAVICULA	92
ACHNANTHES	205	ACHNANTHES	88
OTHER	1072	OTHER	319
TOTAL	3036	TOTAL	880

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	51052.	**********	**********	20163.	71215.
NITROGEN	65710.	**********	**********	478740.	544450.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	22336.	69.	111.38
NITROGEN	544450.	0.	851.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
PINE RIVER	5.6	740.7	0.120	2.209	27.	620.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - CRYSTAL LAKE (OLIGOTROPHIC)
COUNTY - MONTCALM
STORET NO. - 2694 WORKING PAPER NO. 191. NTIS ACCESSION NO. PB-240 231/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	14.50	2.93	4.2	0.1	3.3

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
127.	325.	3.0	0.009	0.007	0.170	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/15/72) P	(9/17/72) P	(11/14/72) P
2.9	0.1			

SUMMARY OF PHYTOPLANKTON DATA

11/14/72 GENERA	COUNT	9/17/72 GENERA	COUNT
DINOBRYON	1394	ANACYSTIS(MICROCYSTIS)	944
FLAGELLATES	923	DINOBRYON	217
ASTERIONELLA	433	MERISMOPEDIA	112
ACHNANTHES	226	APHANOCAPSA	61
NAVICULA	132	CHROOCOCCUS	51
OTHER	922	OTHER	170
TOTAL	4030	TOTAL	1555

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	32.	172.	204.
NITROGEN	**********	**********	1129.	7515.	8644.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	54.	73.	0.07
NITROGEN	4907.	43.	3.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED STREAM	0.082	9.8	0.038	1.382	11.	373.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - HIGGINS LAKE (OLIGOTROPHIC)
COUNTY - ROSCOMMON
STORET NO. - 2695 WORKING PAPER NO. 195. NTIS ACCESSION NO. PB-240 233/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	127.43	38.85	14.9	1.2	15.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
109.	230.	5.9	0.006	0.004	0.070	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
1.0	**********	(6/15/72) N	(9/16/72) P	(11/14/72) N

SUMMARY OF PHYTOPLANKTON DATA

9/16/72 GENERA	COUNT	11/14/72 GENERA	COUNT
LYNGBYA	196	FLAGELLATES	1583
MELOSIRA	129	CHROOCOCCUS	1030
ANACYSTIS(MICROCYSTIS)	126	FRAGILARIA	904
DINOBRYON	87	KIRCHNERIELLA	352
FLAGELLATES	54	DINOBRYON	327
OTHER	252	OTHER	2839
TOTAL	844	TOTAL	7035

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	290.	739.	1029.
NITROGEN	**********	**********	10943.	45800.	56744.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	308.	70.	0.03
NITROGEN	26363.	54.	1.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BIG CREEK	0.048	27.2	0.012	0.791	1.	44.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - HOUGHTON LAKE (EUTROPHIC)
COUNTY - ROSCOMMON
STORET NO. - 2696 WORKING PAPER NO. 196. NTIS ACCESSION NO. PB-241 813/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	574.98	81.12	2.3	4.4	1.3

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
83.	210.	2.0	0.016	0.008	0.170	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/15/72) N	(9/20/72) P	(11/14/72) P
9.2	**********			

SUMMARY OF PHYTOPLANKTON DATA

9/20/72 GENERA	COUNT	11/14/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	1401	FRAGILARIA	1811
LYNGBYA	708	FLAGELLATES	1434
ACHNANTHES	557	ANACYSTIS(MICROCYSTIS)	1245
SYNEDRA	407	DINOBRYON	905
FLAGELLATES	392	ACHNANTHES	868
OTHER	1595	OTHER	2718
TOTAL	5060	TOTAL	8981

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1034.	**********	508.	3274.	4816.
NITROGEN	38875.	**********	19184.	197170.	255229.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2331.	52.	0.06
NITROGEN	97433.	62.	3.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BACKUS CREEK	2.0	233.1	0.018	1.125	5.	311.
SPRING BROOK	0.011	3.4	0.030	0.931	3.	105.
DENTON CREEK	0.4	123.5	0.018	1.167	2.	82.
KNAPPEN CREEK	0.096	11.9	0.020	1.082	5.	272.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - THOMPSON LAKE (EUTROPHIC)
COUNTY - LIVINGSTON
STORET NO. - 2697 WORKING PAPER NO. 214. NTIS ACCESSION NO. PB-240 236/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	30.82	1.06	2.7	0.2	152.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
170.	480.	2.3	0.041	0.025	0.440	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
12.0	**********	(6/16/72) N	(9/19/72) N	(11/15/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/16/72 GENERA	COUNT	9/19/72 GENERA	COUNT	11/15/72 GENERA	COUNT
ANABAENA	702	CYCLOTELLA	10540	FRAGILARIA	597
OSCILLATORIA	695	FRAGILARIA	4144	DINOBRYON	443
ASTERIONELLA	29	ANACYSTIS(MICROCYSTIS)	2703	KIRCHNERIELLA	244
CHARACIUM	22	MICRACTINIUM	1718	ANACYSTIS(MICROCYSTIS)	136
FLAGELLATES	14	MELOSIRA	1441	SYNEDRA	81
OTHER	7	OTHER	9004	OTHER	343
TOTAL	1469	TOTAL	29550	TOTAL	1844

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	54.	376.	431.
NITROGEN	**********	**********	2023.	11574.	13596.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	526.	LOSS	0.41
NITROGEN	9433.	31.	12.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED CREEK (81)	0.1	19.7	0.052	1.527	12.	350.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - PERE MARQUETTE (EUTROPHIC)
COUNTY - MASON
STORET NO. - 2698 WORKING PAPER NO. 205, NTIS ACCESSION NO. PB-240 763/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	2007.25	2.24	******	19.2	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
143.	430.	1.3	0.030	0.019	0.270	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
11.8	4.3	(6/17/72) N	(9/18/72) P	(11/13/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/17/72 GENERA	COUNT	9/18/72 GENERA	COUNT	11/13/72 GENERA	COUNT
OOCYSTIS	2224	MELOSIRA	1040	CHROOCOCCUS	1039
CYCLOTELLA	1302	CYCLOTELLA	154	FLAGELLATES	964
ACHNANTHES	344	FLAGELLATES	154	ANABAENA	301
COCCONEIS	108	RAPHIDIOPSIS	90	ACHNANTHES	286
MELOSIRA	90	LYNGBYA	81	FRAGILARIA	286
OTHER	200	OTHER	588	OTHER	1281
TOTAL	4268	TOTAL	2107	TOTAL	4157

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	12630.	**********	**********	22449.	35079.
NITROGEN	50503.	**********	**********	523878.	574381.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	32263.	8.	15.65
NITROGEN	709351.	LOSS	256.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
PERE MARQUETTE RIVER	19.0	1989.1	0.041	0.870	11.	259.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MICHIGAN

NAME - STRAWBERRY LAKE (EUTROPHIC)
COUNTY - LIVINGSTONE
STORET NO. - 2699 WORKING PAPER NO. 213. NTIS ACCESSION NO. PB-242 817/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	914.27	1.04	6.7	6.2	13.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
188.	468.	2.0	0.068	0.049	0.530	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
11.1	16.9	(6/17/72) N	(9/19/72) N	(11/13/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/17/72 GENERA	COUNT	9/19/72 GENERA	COUNT	11/13/72 GENERA	COUNT
SCHROEDERIA	434	ANABAENA	1131	ASTERIONELLA	1834
DINOBRYON	217	ANACYSTIS(MICROCYSTIS)	792	FLAGELLATES	1156
COCCONEIS	163	DINOBRYON	769	DINOBRYON	879
MELOSIRA	87	MELOSIRA	656	SCENEDESMUS	653
CYCLOTELLA	108	FLAGELLATES	498	MELOSIRA	628
OTHER	117	OTHER	1268	OTHER	1709
TOTAL	1166	TOTAL	5114	TOTAL	6859

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1324.	**********	59.	7973.	9556.
NITROGEN	13379.	**********	2240.	218245.	233864.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	7447.	22.	9.19
NITROGEN	203932.	13.	224.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HURON RIVER	5.2	774.4	0.046	1.307	9.	228.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LAKE WINONA (EUTROPHIC)
COUNTY - DOUGLAS
STORET NO. - 2701 WORKING PAPER NO. 135. NTIS ACCESSION NO. PB-240 506/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	7.51	0.78	1.3	0.0	1.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
139.	343.	0.5	0.107	0.022	0.240	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
58.6	21.6	(7/ 6/72) N	(9/ 1/72) N	(10/28/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/ 6/72 GENERA	COUNT	9/ 1/72 GENERA	COUNT	10/28/72 GENERA	COUNT
LYNGBYA	54545	LYNGBYA	103571	OSCILLATORIA	30758
MARSSONIELLA	10182	ANACYSTIS(MICROCYSTIS)	24286	LYNGBYA	21364
FLAGELLATES	3818	ANABAENA	10714	FLAGELLATES	9545
MERISMOPEDIA	3091	MERISMOPEDIA	6428	ANACYSTIS(MICROCYSTIS)	8485
CHROOCOCCUS	182	SCENEDESMUS	3571	SYNEDRA	6667
OTHER	14364	OTHER	10001	OTHER	18333
TOTAL	86182	TOTAL	158571	TOTAL	95152

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1247.	**********	9.	27.	1283.
NITROGEN	4014.	**********	372.	1283.	5669.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	54.	96.	1.65
NITROGEN	816.	86.	7.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UPPER LAKE WINONA INLET	0.011	7.5	0.163	2.507	7.	109.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - WOLF LAKE (EUTROPHIC)
COUNTY - BELTRAMI, HUBBARD
STORET NO. - 2742 WORKING PAPER NO. 136, NTIS ACCESSION NO. PB-240 505/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	1771.56	4.25	8.5	11.5	37.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
145.	280.	1.2	0.050	0.023	0.150	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(7/11/72) N	(9/ 8/72) N	(10/21/72) N
17.2	1.6			

SUMMARY OF PHYTOPLANKTON DATA

7/11/72 GENERA	COUNT	9/ 8/72 GENERA	COUNT	10/21/72 GENERA	COUNT
APHANOTHECE	8986	ANABAENA	987	MELOSIRA	8163
DINOBRYON	399	ANACYSTIS(MICROCYSTIS)	475	FRAGILARIA	1566
ANABAENA	181	FLAGELLATES	264	ANABAENA	1144
FRAGILARIA	109	OSCILLATORIA	158	STEPHANODISCUS	361
TABELLARIA	36	MELOSIRA	128	FLAGELLATES	361
OTHER	72	OTHER	656	OTHER	935
TOTAL	9783	TOTAL	2668	TOTAL	12530

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	13483.	**********	36.	13832.	27351.
NITROGEN	47624.	**********	1270.	207741.	256635.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	23941.	12.	6.43
NITROGEN	332599.	LOSS	60.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MISSISSIPPI RIVER	11.2	1730.1	0.082	0.718	8.	114.
LITTLE WOLF LAKE OUTLET	0.2	27.7	0.020	0.760	4.	136.
MUD LAKE OUTLET	0.008	1.6	0.023	1.143	3.	175.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - WOODCOCK LAKE (HYPEREUTROPHIC)
COUNTY - KANDIYOHI
STORET NO. - 27A3 WORKING PAPER NO. 141. NTIS ACCESSION NO. PB-243 903/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	0.51	0.8	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
238.	470.	0.4	1.000	0.670	0.550	••••••

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(7/ 2/72) N	(8/31/72) N	(10/25/72) N
75.4	••••••••••			

SUMMARY OF PHYTOPLANKTON DATA

7/ 2/72 GENERA	COUNT	8/31/72 GENERA	COUNT	10/25/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	16396	APHANOCAPSA	30374	ANABAENA	4586
MERISMOPEDIA	8198	ANACYSTIS(MICROCYSTIS)	21334	CHROOCOCCUS	3834
CYCLOTELLA	5766	MERISMOPEDIA	13018	DINOBRYON	2481
SCENEDESMUS	3243	LYNGBYA	4339	MERISMOPEDIA	2481
ANABAENA	991	ANABAENA	1446	CYLINDROCYSTIS	2256
OTHER	2793	OTHER	2893	OTHER	6994
TOTAL	37387	TOTAL	73404	TOTAL	22632

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LAKE PEPIN (EUTROPHIC)
COUNTY - GOODHUE, WABASHA, (MN); PIERCE, PEPIN, (WI)
STORET NO. - 2744 WORKING PAPER NO. 119. NTIS ACCESSION NO. PB-240 513/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	146593.94	101.17	5.1	659.5	9.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
151.	438.	0.8	0.185	0.140	1.090	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
14.9	**********	(6/28/72) N	(9/ 3/72) N	(11/ 4/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/28/72 GENERA	COUNT	9/ 3/72 GENERA	COUNT
APHANOCAPSA	1817	MERISMOPEDIA	66000
ANACYSTIS(MICROCYSTIS)	172	KIRCHNERIELLA	35818
DINOHRYON	126	ANACYSTIS(MICROCYSTIS)	21818
SYNEURA	108	APHANOCAPSA	8727
COCCONEIS	81	CHROOCOCCUS	5818
OTHER	200	OTHER	18364
TOTAL	2504	TOTAL	156545

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1292879.	3678.	**********	2182213.	3478770.
NITROGEN	4496113.	5152.	**********	42926576.	47425840.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3085138.	11.	34.38
NITROGEN	50511360.	LOSS	468.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MISSISSIPPI RIVER	449.1	120693.9	0.205	3.014	18.	351.
RUSH RIVER	2.6	525.8	0.117	2.295	20.	376.
ISABELLE CREEK	0.5	108.8	0.561	2.832	25.	307.
WELLS CREEK	0.8	179.2	0.231	2.566	36.	391.
GILMERT CREEK	0.3	55.9	0.224	2.059	38.	337.
MILLER CREEK	0.2	46.1	0.161	2.391	25.	362.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - ZUMBRO LAKE (EUTROPHIC)
COUNTY - OLMSTED.#ABASHA
STORET NO. - 27A5 WORKING PAPER NO. 137. NTIS ACCESSION NO. PB-243 606/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	2206.68	2.47	5.5	8.6	18

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
203.	570.	1.5	0.401	0.330	2.515	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
12.5	**********	(6/28/72) N	(8/27/72) N	(11/ 3/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/28/72 GENERA	COUNT	8/27/72 GENERA	COUNT	11/ 3/72 GENERA	COUNT
ANABAENA	8840	MELOSIRA	1474	CYLINDROCYSTIS	4171
MELOSIRA	688	STEPHANODISCUS	271	FLAGELLATES	1407
STEPHANODISCUS	652	FLAGELLATES	126	ANABAENA	754
DINOBRYON	652	ANABAENA	108	DINOBRYON	754
CRYPTOMONAS	362	NAVICULA	72	ANACYSTIS(MICROCYSTIS)	603
OTHER	1089	OTHER	426	OTHER	3668
TOTAL	12283	TOTAL	2477	TOTAL	11357

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	170027.	**********	63.	35583.	205673.
NITROGEN	234218.	**********	2404.	1167381.	1404002.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	114748.	44.	83.16
NITROGEN	1327709.	5.	567.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
S. FORK. ZUMBRO RIVER	3.7	945.3	0.690	5.584	16.	505.
MIDDLE FORK.ZUMBRO RIVER	4.4	1142.2	0.226	5.684	16.	560.
DRY RUN CREEK	0.3	75.1	0.147	3.651	17.	412.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - SPRING LAKE (EUTROPHIC)
COUNTY - DAKOTA, WASHINGTON
STORET NO. - 2746 WORKING PAPER NO. 127. NTIS ACCESSION NO. PB-240 511/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	96347.94	23.92	2.4	287.1	2.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
179.	490.	0.5	0.240	0.156	1.410	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
21.8	34.5	(6/28/72) N	(9/ 3/72) N	(11/ 4/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/28/72 GENERA	COUNT	9/ 3/72 GENERA	COUNT	11/ 4/72 GENERA	COUNT
STEPHANODISCUS	4088	MELOSIRA	814	CYCLOTELLA	8571
MELOSIRA	2189	RAPHIDIOPSIS	524	FLAGELLATES	1278
SCENEDESMUS	566	CYCLOTELLA	380	ANACYSTIS(MICROCYSTIS)	1128
RAPHIDIOPSIS	498	SYNEDRA	325	FRAGILARIA	677
GLOEOCAPSA	453	SCENEDESMUS	325	NAVICULA	526
OTHER	1925	OTHER	2189	OTHER	3309
TOTAL	9623	TOTAL	4557	TOTAL	15489

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1265514.	**********	**********	1297092.	2562606.
NITROGEN	4249809.	**********	**********	26355072.	30604880.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2489161.	3.	107.14
NITROGEN	34069808.	LOSS	1279.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MISSISSIPPI RIVER	280.2	95311.9	0.266	3.797	13.	272.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LAKE ST. CROIX (EUTROPHIC)
COUNTY - WASHINGTON, (MN); ST. CROIX, PIERCE, (WI)
STORET NO. - 2747 WORKING PAPER NO. 122. NTIS ACCESSION NO. PB-240 319/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	19942.99	33.22	8.8	144.2	23.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
71.	143.	1.1	0.055	0.036	0.350	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
10.2	**********	(6/28/72) N	(8/26/72) N	(11/ 4/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/28/72 GENERA	COUNT	8/26/72 GENERA	COUNT	11/ 4/72 GENERA	COUNT
MELOSIRA	1039	DINOBRYON	2532	CYCLOTELLA	2264
ACHNANTHES	783	CYCLOTELLA	1338	DINOBRYON	1396
DINOBRYON	693	CHROOCOCCUS	524	FLAGELLATES	1057
STEPHANODISCUS	437	MELOSIRA	289	MELOSIRA	1057
FLAGELLATES	376	PEDIASTRUM	271	ASTERIONELLA	830
OTHER	1582	OTHER	1086	OTHER	2830
TOTAL	4910	TOTAL	6040	TOTAL	9434

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	34227.	**********	263.	260857.	295347.
NITROGEN	120172.	**********	9891.	5562981.	5693044.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	199152.	33.	8.89
NITROGEN	5623392.	1.	171.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ST. CROIX RIVER	126.7	16964.5	0.060	1.140	14.	270.
VALLEY BRANCH STREAM	0.3	33.7	0.031	2.377	8.	614.
TROUT BROOK	0.374	28.5	0.053	1.812	4.	140.
KINNICKINNIC RIVER	2.7	432.5	0.187	2.673	18.	472.
WILLOW RIVER	1.2	681.2	0.033	1.717	1.	74.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - BUDD LAKE (EUTROPHIC)
COUNTY - MARTIN
STORET NO. - 2748 WORKING PAPER NO. BY. NTIS ACCESSION NO. PB-240 204/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	98.94	0.90	3.5	0.3	125.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
141.	430.	0.8	0.192	0.153	0.645	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(7/ 1/72) N	(8/30/72) N	(10/29/72) N
21.8	**********			

SUMMARY OF PHYTOPLANKTON DATA

7/ 1/72 GENERA	COUNT	8/30/72 GENERA	COUNT	10/29/72 GENERA	COUNT
ANABAENA	12432	ANABAENA	790	ANABAENA	3015
MELOSIRA	4594	CYCLOTELLA	211	FLAGELLATES	3015
FLAGELLATES	1802	FLAGELLATES	163	DINOBRYON	1508
DINOBRYON	1081	OOCYSTIS	126	SCENEDESMUS	1156
CRYPTOMONAS	360	MELOSIRA	114	NAVICULA	603
OTHER	1443	OTHER	242	OTHER	2813
TOTAL	21712	TOTAL	1646	TOTAL	12110

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	23.	1506.	1528.
NITROGEN	**********	**********	821.	35546.	36467.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1392.	9.	1.70
NITROGEN	30562.	16.	40.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HALL LK-BUDD LK CONN	0.3	95.8	0.172	3.635	15.	351.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - FOREST LAKE (EUTROPHIC)
COUNTY - WASHINGTON
STORET NO. - 2749 WORKING PAPER NO. 100. NTIS ACCESSION NO. PB-239 705/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	47.14	3.11	3.4	0.2	5.7

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
125.	270.	1.9	0.021	0.010	0.140	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
10.5	0.2	(6/29/72) N	(8/27/72) P	(11/ 5/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/29/72 GENERA	COUNT	8/27/72 GENERA	COUNT	11/ 5/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	3020	ANACYSTIS(MICROCYSTIS)	2184	DINOBRYON	2189
DINOBRYON	868	ANABAENA	1084	FLAGELLATES	1849
MELOSIRA	253	OSCILLATORIA	888	FRAGILARIA	830
CRYPTOMONAS	217	CHROOCOCCUS	783	ACHNANTHES	566
GLOEOCAPSA	199	SYNURA	241	ANABAENA	490
OTHER	940	OTHER	1627	OTHER	2982
TOTAL	5497	TOTAL	6807	TOTAL	8906

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	63.	952.	1016.
NITROGEN	**********	**********	2449.	25778.	28227.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3465.	LOSS	0.11
NITROGEN	24744.	12.	3.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED TRIBUTARY (A-1)	0.025	7.3	0.185	3.754	21.	416.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - WHITE BEAR LAKE (MESOTROPHIC)
COUNTY - RAMSEY, WASHINGTON
STORET NO. - 2780 WORKING PAPER NO. 144. NTIS ACCESSION NO. PB-240 504/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	10.76	6.9	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
111.	255.	3.5	0.014	0.008	0.100	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
5.2	0.3	(6/29/72) P	(8/27/72) P	(11/ 5/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/29/72 GENERA	COUNT	8/27/72 GENERA	COUNT	11/ 5/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	897	ANACYSTIS(MICROCYSTIS)	1160	FLAGELLATES	1859
DINOBRYON	784	DINOBRYON	542	DINOBRYON	1231
FRAGILARIA	271	CHROOCOCCUS	279	ANABAENA	402
CHROOCOCCUS	136	FRAGILARIA	166	FRAGILARIA	327
FLAGELLATES	83	ANABAENA	136	NITZSCHIA	251
OTHER	369	OTHER	392	OTHER	1332
TOTAL	2540	TOTAL	2675	TOTAL	5402

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - WAGONGA LAKE (EUTROPHIC)
COUNTY - KANDIYOHI
STORET NO. - 2781 WORKING PAPER NO. 133. NTIS ACCESSION NO. PB-240 507/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	66.04	6.54	1.3	0.2	1.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
220.	800.	0.3	1.000	0.710	0.480	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
96.5	**********	(7/ 2/72) N	(8/31/72) N	(10/25/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/ 2/72 GENERA	COUNT	8/31/72 GENERA	COUNT	10/25/72 GENERA	COUNT
OSCILLATORIA	42727	OSCILLATORIA	33997	OSCILLATORIA	20226
ANABAENA	8333	LYNGBYA	13020	FLAGELLATES	2105
MELOSIRA	6364	ANABAENA	9042	MELOSIRA	1353
MARSSONIELLA	1060	MELOSIRA	2893	DINOBRYON	902
STEPHANODISCUS	758	ANACYSTIS(MICROCYSTIS)	2712	SCENEDESMUS	677
OTHER	1667	OTHER	7594	OTHER	2030
TOTAL	60909	TOTAL	69258	TOTAL	27293

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	24499.	**********	**********	1646.	26145.
NITROGEN	87642.	**********	**********	17193.	104834.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	11197.	57.	4.00
NITROGEN	34834.	67.	16.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
COUNTY DITCH NO. 23-A	0.1	44.5	0.501	3.307	11.	75.

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN MINNESOTA

NAME - GREEN LAKE (MESOTHOPHIC)
COUNTY - KANDIYUHI
STORET NO. - 2782 WORKING PAPER NO. 101. NTIS ACCESSION NO. PB-239 706/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	357.42	21.88	6.4	1.2	3.7

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
173.	340.	2.8	0.015	0.009	0.140	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
4.9	1.3	(7/ 2/72) N	(8/31/72) P	(10/25/72) P

SUMMARY OF PHYTOPLANKTON DATA

7/ 2/72 GENERA	COUNT	8/31/72 GENERA	COUNT	10/25/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	1826	DINOBRYON	675	FRAGILARIA	1491
DINOBRYON	1808	ANACYSTIS(MICROCYSTIS)	476	FLAGELLATES	738
FRAGILARIA	669	ANABAENA	139	DINOBRYON	572
CHROOCOCCUS	344	MERISMOPEDIA	120	ANABAENA	527
PEDIASTRUM	235	FLAGELLATES	84	MELOSIRA	301
OTHER	398	OTHER	260	OTHER	1491
TOTAL	5280	TOTAL	1754	TOTAL	5120

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	844.	**********	195.	998.	2036.
NITROGEN	4390.	**********	7320.	73574.	85283.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	662.	67.	0.09
NITROGEN	38912.	54.	3.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
NEST LAKE OUTLET	1.1	318.6	0.040	1.555	2.	153.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - NEST LAKE (EUTROPHIC)
COUNTY - KANDIYOHI
STORET NO. - 2783 WORKING PAPER NO. 117. NTIS ACCESSION NO. PB-240 301/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	318.57	3.82	4.6	1.1	140.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
190.	348.	1.4	0.040	0.022	0.100	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
21.4	3.8	(7/ 2/72) N	(8/31/72) N	(10/25/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/ 2/72 GENERA	COUNT	8/31/72 GENERA	COUNT	10/25/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	1609	ANACYSTIS(MICROCYSTIS)	3454	FLAGELLATES	2940
DINOBRYON	560	CERATIUM	778	DINOBRYON	729
ANABAENA	586	LYNGBYA	488	MELOSIRA	427
FLAGELLATES	397	ANABAENA	470	OSCILLATORIA	201
MELOSIRA	235	DINOBRYON	416	CHROOCOCCUS	151
OTHER	508	OTHER	1410	OTHER	1130
TOTAL	3725	TOTAL	7016	TOTAL	5578

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1751.	**********	**********	1283.	3034.
NITROGEN	4730.	**********	**********	58041.	62771.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1324.	56.	0.79
NITROGEN	52821.	16.	16.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MIDDLE FK CHOW RIVER	1.0	297.4	0.034	1.514	4.	177.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LAKE DARLING (HYPEREUTROPHIC)
COUNTY - DOUGLAS
STORET NO. - 2784 WORKING PAPER NO. 96. NTIS ACCESSION NO. PB-239 576/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	453.25	3.86	6.2	0.9	318.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
202.	400.	2.6	0.017	0.009	0.190	••••••

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
11.8	••••••••••	(7/ 6/72) N	(9/ 1/72) N	(10/25/72) P

SUMMARY OF PHYTOPLANKTON DATA

7/ 6/72 GENERA	COUNT	9/ 1/72 GENERA	COUNT	10/25/72 GENERA	COUNT
ANABAENA	1175	ANACYSTIS(MICROCYSTIS)	2025	FRAGILARIA	942
DINOBRYON	714	LYNGBYA	1700	DINOBRYON	885
ANACYSTIS(MICROCYSTIS)	606	DINOBRYON	574	ANABAENA	678
FLAGELLATES	262	ANABAENA	524	FLAGELLATES	377
COELOSPHAERIUM	136	APHANOCAPSA	452	ASTERIONELLA	264
OTHER	705	OTHER	615	OTHER	1110
TOTAL	3598	TOTAL	5895	TOTAL	4256

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	730.	730.
NITROGEN	••••••••••	••••••••••	••••••••••	35288.	35288.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	526.	28.	0.19
NITROGEN	32925.	7.	9.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LAKE COWDRY OUTLET	0.9	445.5	0.024	1.144	1.	69.
LAKE ALVIN OUTLET	0.003	1.3	0.065	1.375	4.	84.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LAKE LE HOMME DIEU (EUTROPHIC)
COUNTY - DOUGLAS
STORET NO. - 2785 WORKING PAPER NO. 106. NTIS ACCESSION NO. PB-239 662/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	109.56	7.06	6.4	0.2	7.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
167.	305.	2.3	0.019	0.010	0.175	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
12.4	0.2	(7/ 6/72) N	(9/ 2/72) P	(10/28/72) P

SUMMARY OF PHYTOPLANKTON DATA

7/ 6/72 GENERA	COUNT	9/ 2/72 GENERA	COUNT	10/28/72 GENERA	COUNT
ANABAENA	3261	ANACYSTIS(MICROCYSTIS)	4493	FLAGELLATES	2264
ANACYSTIS(MICROCYSTIS)	2319	MERISMOPEDIA	906	DINOBRYON	1585
DINOBRYON	1413	CHROOCOCCUS	833	SCENEDESMUS	1472
CYCLOTELLA	254	LYNGBYA	580	PEDIASTRUM	981
SCENEDESMUS	145	DINOBRYON	362	ANABAENA	377
OTHER	796	OTHER	761	OTHER	1396
TOTAL	8188	TOTAL	7935	TOTAL	8075

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	340.	**********	104.	336.	780.
NITROGEN	1265.	**********	3955.	16077.	21297.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	168.	78.	0.11
NITROGEN	8100.	62.	3.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LAKE GENEVA OUTLET	0.1	75.6	0.036	1.034	2.	88.
KRUEGER'S SLOUGH OUTLET	0.003	2.1	0.022	1.246	2.	66.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LAKE CALHOUN (EUTROPHIC)
COUNTY - HENNEPIN
STORET NO. - 2746 WORKING PAPER NO. 90. NTIS ACCESSION NO. PB-243 605/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	1.68	18.6	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
118.	470.	1.8	0.070	0.036	0.605	••••••

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
11.5	4.3	(7/ 7/72) N	(9/ 5/72) N	(10/27/72) N

SUMMARY OF PHYTOPLANKTON DATA

9/ 5/72 GENERA	COUNT	10/27/72 GENERA	COUNT
ANABAENA	3653	STICHOCOCCUS	3367
FLAGELLATES	344	FLAGELLATES	2814
APHANOCAPSA	271	OSCILLATORIA	2211
CLOSTERIUM	253	DINOBRYON	854
DINOBRYON	235	SYNEDRA	402
OTHER	687	OTHER	2864
TOTAL	5443	TOTAL	12512

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LAKE OF ISLES OUTLET	0.031	11.4	0.074	1.526	••••••••••	••••••••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - WALLMARK (MUD) LAKE (EUTROPHIC)
COUNTY - CHISAGO
STORET NO. - 2787 WORKING PAPER NO. 146. NTIS ACCESSION NO. PB-240 502/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	0.47	******	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
96.	313.	0.3	3.600	3.580	0.710	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L -DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
248.9	34.2	(7/ 7/72) N	(8/27/72) N	(11/ 5/72) N

SUMMARY OF PHYTOPLANKTON DATA

8/27/72 GENERA	COUNT	11/ 5/72 GENERA	COUNT
OSCILLATORIA	22883	KIRCHNERIELLA	13636
MERISMOPEDIA	8198	RAPHIDIOPSIS	5090
GLOEOCAPSA	7207	ANACYSTIS(MICROCYSTIS)	4182
CRYPTOMONAS	3784	SCENEDESMUS	3636
ANABAENA	2342	APHANOCAPSA	2364
OTHER	5946	OTHER	15637
TOTAL	>0360	TOTAL	44545

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LOST LAKE (HYPEREUTROPHIC)
COUNTY - ST. LOUIS
STORET NO. - 2788 WORKING PAPER NO. 163. NTIS ACCESSION NO. PB-243 905/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	0.31	3.0	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
90.	230.	0.8	0.346	0.168	0.300	••••••

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(7/ 8/72) N	(9/ 9/72) N	(10/19/72) N
143.5	17.7			

SUMMARY OF PHYTOPLANKTON DATA

7/ 8/72 GENERA	COUNT	9/ 9/72 GENERA	COUNT	10/19/72 GENERA	COUNT
ANABAENA	1450	LYNGBYA	23840	CYCLOTELLA	81060
DINOBRYON	1390	ANACYSTIS(MICROCYSTIS)	5906	DICTYOSPHAERIUM	15152
MALLOMONAS	1057	ANABAENA	4239	SCENEDESMUS	8333
GLOEOCAPSA	876	MERISMOPEDIA	1413	MICRACTINIUM	6667
CRYPTOMONAS	665	SCENEDESMUS	652	ACTINASTRUM	5696
OTHER	1329	OTHER	1595	OTHER	14243
TOTAL	6767	TOTAL	37645	TOTAL	131061

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LAKE CARLOS (MESOTROPHIC)
COUNTY - DOUGLAS
STORET NO. - 2769 WORKING PAPER NO. 91. NTIS ACCESSION NO. PB-240 203/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	606.06	10.20	13.1	1.1	3.7

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
90.	230.	2.8	0.346	0.168	0.300	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
4.6	0.9	(7/10/72) P	(9/ 2/72) P	(10/28/72) P

SUMMARY OF PHYTOPLANKTON DATA

7/10/72 GENERA	COUNT	9/ 2/72 GENERA	COUNT	10/28/72 GENERA	COUNT
DINOBRYON	3201	ANACYSTIS(MICROCYSTIS)	3986	CHROOCOCCUS	1558
FLAGELLATES	452	KIRCHNERIELLA	3080	FLAGELLATES	1306
ANACYSTIS(MICROCYSTIS)	434	MERISMOPEDIA	1413	DINOBRYON	904
ANABAENA	235	DINOBRYON	616	LYNGBYA	828
CHROOCOCCUS	199	ANABAENA	507	SYNEDRA	176
OTHER	795	OTHER	2463	OTHER	1106
TOTAL	5316	TOTAL	12065	TOTAL	5678

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	68.	**********	426.	912.	1406.
NITROGEN	431.	**********	13767.	53766.	67964.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	617.	56.	0.14
NITROGEN	37764.	44.	6.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LAKE DARLING OUTLET	0.9	453.2	0.018	1.295	1.	73.
LE HOMME DIEU LP OUTLET	0.2	109.6	0.025	1.240	1.	70.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LAKE ANUMOSIA (EUTROPHIC)
COUNTY - BELTRAMI
STORET NO. - 2709 WORKING PAPER NO. 81. NTIS ACCESSION NO. PB-239 644/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	1895.88	6.11	7.9	11.9	47.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
139.	265.	1.4	0.025	0.010	0.140	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
13.0	**********	(7/11/72) N (9/ 8/72) N (10/21/72) P

SUMMARY OF PHYTOPLANKTON DATA

7/11/72 GENERA	COUNT	9/ 8/72 GENERA	COUNT	10/21/72 GENERA	COUNT
ANABAENA	768	ANACYSTIS(MICROCYSTIS)	1348	MELOSIRA	2259
FLAGELLATES	572	ANABAENA	470	ANABAENA	452
ANACYSTIS(MICROCYSTIS)	557	APHANOCAPSA	217	FLAGELLATES	452
DINOBRYON	497	FLAGELLATES	205	SCENEDESMUS	286
OSCILLATORIA	361	LYNGBYA	169	DINOBRYON	271
OTHER	438	OTHER	408	OTHER	1174
TOTAL	3193	TOTAL	2867	TOTAL	4894

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	11864.	**********	36.	12649.	24549.
NITROGEN	47624.	**********	1351.	312272.	361247.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	15540.	37.	4.02
NITROGEN	319011.	12.	59.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MISSISSIPPI RIVER	11.5	1771.6	0.071	0.957	7.	161.
BIG LAKE OUTLET	0.4	78.3	0.021	0.979	3.	154.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LAKE BEMIDJI (EUTROPHIC)
COUNTY - BELTRAMI
STORET NO. - 2701 WORKING PAPER NO. 84. NTIS ACCESSION NO. PB-240 223/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	1631.70	25.98	9.8	19.9	268.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
157.	300.	2.2	0.036	0.021	0.098	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
9.5	1.3	(7/11/72) N	(9/ 8/72) N	(10/21/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/11/72 GENERA	COUNT	9/ 8/72 GENERA	COUNT	10/21/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	2803	ANACYSTIS(MICROCYSTIS)	2355	MELOSIRA	1747
ANABAENA	940	LYNGBYA	2283	ANABAENA	723
DINOBRYON	723	ANABAENA	1377	FRAGILARIA	602
MELOSIRA	163	DINOBRYON	399	STEPHANODISCUS	422
FRAGILARIA	90	FLAGELLATES	217	CHROOCOCCUS	346
OTHER	543	OTHER	1231	OTHER	1521
TOTAL	5262	TOTAL	7862	TOTAL	5361

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	86.	11388.	11474.
NITROGEN	**********	**********	3311.	344680.	347991.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	7388.	36.	0.44
NITROGEN	260993.	25.	13.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MISSISSIPPI RIVER	10.4	1512.6	0.034	0.938	7.	198.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - MUD LAKE (EUTROPHIC)
COUNTY - ITASCA
STORET NO. - 2702 WORKING PAPER NO. 115. NTIS ACCESSION NO. PB-240 514/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	3.11	0.23	1.3	0.0	243.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
117.	315.	0.2	0.408	0.251	0.815	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
87.4	30.1	(7/12/72) N	(10/22/72) N

SUMMARY OF PHYTOPLANKTON DATA
10/22/72

GENERA	COUNT
ANABAENA	3072
FLAGELLATES	2048
CHROOCOCCUS	1386
ANACYSTIS(MICROCYSTIS)	392
DINOBRYON	271
OTHER	873
TOTAL	8042

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1111.	**********	**********	14.	1125.
NITROGEN	2807.	**********	**********	662.	3469.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	59.	95.	4.96
NITROGEN	680.	80.	15.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED CREEK (A-1)	0.006	1.6	0.031	1.103	3.	146.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - ALBERT LEA LAKE (EUTROPHIC)
COUNTY - FREEBORN
STORET NO. - 2702 WORKING PAPER NO. 80. NTIS ACCESSION NO. PB-239 643/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	381.77	9.93	1.1	1.7	73.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
184.	680.	0.2	0.958	0.685	0.840	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(7/ 1/72) N	(8/30/72) N	(10/29/72) N
381.2	**********			

SUMMARY OF PHYTOPLANKTON DATA

7/ 1/72 GENERA	COUNT	8/30/72 GENERA	COUNT	10/29/72 GENERA	COUNT
OSCILLATORIA	44727	OSCILLATORIA	39053	CYCLOTELLA	22406
SCENEDESMUS	12727	ANACYSTIS(MICROCYSTIS)	25312	OSCILLATORIA	6241
MERISMOPEDIA	5091	LYNGBYA	16274	FLAGELLATES	4511
ANACYSTIS(MICROCYSTIS)	3818	MERISMOPEDIA	11571	FRAGILARIA	4361
APHANOCAPSA	3454	ANABAENA	10848	SCENEDESMUS	3684
OTHER	7819	OTHER	65088	OTHER	11203
TOTAL	77636	TOTAL	168146	TOTAL	52406

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	52254.	395.	14.	9927.	62590.
NITROGEN	178268.	2639.	512.	425773.	607193.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	44562.	29.	6.30
NITROGEN	384880.	37.	61.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
FOUNTAIN LAKE OUTLET	1.1	256.9	0.180	6.445	17.	912.
PETER LUND CREEK	0.4	75.6	0.302	10.085	48.	1605.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - BADGER LAKE (EUTROPHIC)
COUNTY - POLK
STORET NO. - 2704 WORKING PAPER NO. 82. NTIS ACCESSION NO. PB-239 645/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	88.58	1.43	1.2	0.2	108.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
160.	460.	2.0	0.022	0.013	0.130	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
2.1	**********	(7/11/72) N	(9/ 8/72) P	(10/20/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/11/72 GENERA	COUNT	10/20/72 GENERA	COUNT
DINOBRYON	1713	DINOBRYON	452
ANACYSTIS(MICROCYSTIS)	241	FLAGELLATES	434
CRYPTOMONAS	229	CRYPTOMONAS	187
ANABAENA	72	NAVICULA	64
SCENEDESMUS	48	ACHNANTHES	54
OTHER	194	OTHER	219
TOTAL	2497	TOTAL	1410

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	649.	**********	**********	259.	907.
NITROGEN	1941.	**********	**********	13202.	15143.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	948.	LOSS	0.63
NITROGEN	15098.	0.	10.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
POPLAR RIVER	0.2	74.9	0.043	2.137	3.	135.
MITCHELL LAKE OUTLET	0.011	6.0	0.057	2.076	3.	116.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - BARTLETT LAKE
COUNTY - KOOCHICHING
STORET NO. - 2705

(EUTROPHIC)

WORKING PAPER NO. 83. NTIS ACCESSION NO. PB-234 646/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	8.81	1.23	2.6	0.1	1.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
113.	248.	0.5	0.136	0.028	0.355	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(7/12/72) N	(9/ 8/72) N	(10/21/72) P
49.5	**********			

SUMMARY OF PHYTOPLANKTON DATA

7/12/72 GENERA	COUNT	9/ 8/72 GENERA	COUNT
ANABAENA	6920	ANACYSTIS(MICROCYSTIS)	17970
DINOBRYON	1123	CHROOCOCCUS	7668
ANACYSTIS(MICROCYSTIS)	616	ANABAENA	4586
ANKISTRODESMUS	326	LYNGBYA	1955
SYNEDRA	290	OSCILLATORIA	1729
OTHER	508	OTHER	2791
TOTAL	9783	TOTAL	36699

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	399.	**********	**********	59.	458.
NITROGEN	1193.	**********	**********	2971.	4163.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	195.	57.	0.37
NITROGEN	3383.	19.	3.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED STREAM(A-1)	0.054	8.8	0.128	2.147	22.	384.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - BEAR LAKE (EUTROPHIC)
COUNTY - FREEBORN
STORET NO. - 2706 WORKING PAPER NO. 110. NTIS ACCESSION NO. PB-240 517/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	5.56	0.7	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
121.	420.	0.7	0.176	0.048	0.490	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
61.2	**********	(7/ 1/72) N	(8/30/72) N	(10/29/72) P

SUMMARY OF PHYTOPLANKTON DATA

7/ 1/72 GENERA	COUNT	8/30/72 GENERA	COUNT	10/29/72 GENERA	COUNT
MERISMOPEDIA	52963	ANACYSTIS(MICROCYSTIS)	97614	ANACYSTIS(MICROCYSTIS)	12932
ANACYSTIS(MICROCYSTIS)	32963	LYNGBYA	31815	DINOBRYON	3233
SYNEDRA	6667	MERISMOPEDIA	25307	FLAGELLATES	2782
ANABAENA	4074	FRAGILARIA	17354	FRAGILARIA	2707
FLAGELLATES	2563	APHANOCAPSA	11569	LYNGBYA	2105
OTHER	11511	OTHER	34707	OTHER	10376
TOTAL	110741	TOTAL	218366	TOTAL	34135

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - BIG LAKE (EUTROPHIC)
COUNTY - STEARNS
STORET NO. - 2708 WORKING PAPER NO. 124. NTIS ACCESSION NO. PB-243 770/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	1.63	3.6	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
164.	343.	1.8	0.022	0.012	0.140	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
12.9	**********	(7/ 2/72) N	(8/29/72) P

SUMMARY OF PHYTOPLANKTON DATA

7/ 2/72 GENERA	COUNT	8/29/72 GENERA	COUNT
ANABAENA	1537	ANABAENA	1628
ANACYSTIS(MICROCYSTIS)	1121	ANACYSTIS(MICROCYSTIS)	1031
MELOSIRA	850	DINOBRYON	416
OOCYSTIS	488	FRAGILARIA	289
CHROOCOCCUS	398	MELOSIRA	271
OTHER	1682	OTHER	705
TOTAL	6076	TOTAL	4340

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - BIG STONE (EUTROPHIC)
COUNTY - BIG STONE, (MN); ROBERTS, GRANT, (SD)
STORET NO. - 2709 WORKING PAPER NO. 85, NTIS ACCESSION NO. PB-242 819/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	3004.40	51.03	3.4	3.3	1.7

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
131.	800.	1.0	0.159	0.126	0.335	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(7/ 5/72) N	(9/ 1/72) N	(10/25/72) N
16.5	**********			

SUMMARY OF PHYTOPLANKTON DATA

7/ 5/72 GENERA	COUNT	9/ 1/72 GENERA	COUNT	10/25/72 GENERA	COUNT
MELOSIRA	787	ANABAENA	6630	ANABAENA	7660
ANABAENA	678	KIRCHNERIELLA	1340	FLAGELLATES	2187
DINOBRYON	326	ANACYSTIS(MICROCYSTIS)	217	CHROOCOCCUS	604
CYCLOTELLA	307	DINOBRYON	181	FRAGILARIA	566
ANKISTRODESMUS	54	CHROOCOCCUS	145	DINOBRYON	377
OTHER	117	OTHER	473	OTHER	2229
TOTAL	2269	TOTAL	8986	TOTAL	13623

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	7696.	23.	213.	8014.	15946.
NITROGEN	22599.	**********	8036.	188812.	219447.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	15846.	1.	0.31
NITROGEN	214068.	2.	4.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LITTLE MINNESOTA RIVER	1.3	1222.5	0.097	1.466	2.	19.
#METSTONE RIVER	1.4	1036.0	0.466	3.301	3.	74.
UNNAMED STREAM (D-1)	0.048	42.7	0.089	1.159	3.	38.
UNNAMED STREAM (E-1)	0.034	28.7	0.052	3.106	2.	114.
UNNAMED STREAM (F-1)	0.079	68.9	0.073	1.431	3.	52.
FISH CREEK	0.2	149.7	0.173	2.729	5.	54.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - HIRCH LAKE (EUTROPHIC)
COUNTY - CASS
STORET NO. - 2710 WORKING PAPER NO. 145. NTIS ACCESSION NO. PB-240 503/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	5.19	3.0	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
106.	210.	2.4	0.019	0.009	0.090	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
6.2	1.4	(7/12/72) N (9/ 8/72) P (10/24/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/12/72 GENERA	COUNT	9/ 8/72 GENERA	COUNT	10/24/72 GENERA	COUNT
DINOBRYON	1628	CHROOCOCCUS	1315	FLAGELLATES	2035
ANACYSTIS(MICROCYSTIS)	253	FLAGELLATES	693	DINOBRYON	1533
CYCLOTELLA	229	DINOBRYON	231	FRAGILARIA	427
ANABAENA	109	ANABAENA	90	ANABAENA	201
NAVICULA	96	CRYPTOMONAS	60	CRYPTOMONAS	176
OTHER	182	OTHER	272	OTHER	1406
TOTAL	2497	TOTAL	2661	TOTAL	5778

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - BLACKDUCK LAKE (EUTROPHIC)
COUNTY - BELTRAMI
STORET NO. - 2711 WORKING PAPER NO. 86. NTIS ACCESSION NO. PB-240 224/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	75.11	11.10	4.5	0.4	4.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
128.	243.	1.7	0.038	0.019	0.195	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
14.5	2.1	(7/12/72) N	(9/ 8/72) N	(10/21/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/12/72 GENERA	COUNT	9/ 8/72 GENERA	COUNT	10/21/72 GENERA	COUNT
MELOSIRA	989	ANABAENA	1120	DINOBRYON	2997
DINOBRYON	989	ANACYSTIS(MICROCYSTIS)	590	FLAGELLATES	708
FRAGILARIA	314	LYNGBYA	277	CRYPTOMONAS	648
CRYPTOMONAS	253	FLAGELLATES	265	MELOSIRA	151
ANACYSTIS(MICROCYSTIS)	157	CHROOCOCCUS	241	NAVICULA	105
OTHER	555	OTHER	748	OTHER	542
TOTAL	3257	TOTAL	3241	TOTAL	5151

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	676.	**********	**********	916.	1592.
NITROGEN	2023.	**********	**********	27329.	29351.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	717.	55.	0.14
NITROGEN	16091.	45.	2.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
COBURN CREEK	0.054	11.7	4.043	7.852	20.	251.
CRANDALL LAKE OUTLET	0.062	11.9	0.061	1.519	10.	250.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - BLACKHOOF LAKE (EUTROPHIC)
COUNTY - CROW WING
STORET NO. - 2712 WORKING PAPER NO. 87. NTIS ACCESSION NO. PB-240 225/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	20.72	0.74	4.4	0.1	257.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
103.	230.	1.6	0.043	0.024	0.185	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
12.8	5.6	(6/ 2/72) N	(9/ 4/72) P	(10/24/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/ 2/72 GENERA	COUNT	9/ 4/72 GENERA	COUNT	10/24/72 GENERA	COUNT
ANABAENA	29273	ANACYSTIS(MICROCYSTIS)	627	MELOSIRA	3735
ANACYSTIS(MICROCYSTIS)	2091	MERISMOPEDIA	602	ANABAENA	2620
MELOSIRA	1000	ANABAENA	313	ASTERIONELLA	1898
		MELOSIRA	313	FRAGILARIA	813
		COELOSPHAERIUM	289	FLAGELLATES	663
OTHER	270	OTHER	856	OTHER	1175
TOTAL	32634	TOTAL	3000	TOTAL	10904

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	639.	**********	9.	254.	902.
NITROGEN	1914.	**********	268.	6522.	8703.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	141.	84.	1.22
NITROGEN	5075.	42.	11.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED STREAM(A-1)	0.1	15.0	0.242	1.898	11.	294.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - BUFFALO LAKE (EUTROPHIC)
COUNTY - WRIGHT
STORET NO. - 2713 WORKING PAPER NO. 88. NTIS ACCESSION NO. PB-240 226/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	113.96	6.11	4.4	0.6	1.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
167.	395.	1.0	0.209	0.160	0.795	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
38.0	16.2	(6/30/72) N	(8/29/72) N	(10/26/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/30/72 GENERA	COUNT	8/29/72 GENERA	COUNT	10/26/72 GENERA	COUNT
ANABAENA	14318	ANABAENA	470	ANABAENA	2085
DINOBRYON	758	CYCLOTELLA	398	FLAGELLATES	1281
SYNEDRA	454	FRAGILARIA	320	STEPHANODISCUS	528
MALLOMONAS	303	DINOBRYON	181	DINOBRYON	452
ASTERIONELLA	76	STEPHANODISCUS	96	MELOSIRA	301
OTHER	0	OTHER	182	OTHER	1459
TOTAL	15909	TOTAL	1647	TOTAL	6106

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	4821.	**********	23.	1129.	5973.
NITROGEN	10086.	**********	853.	18000.	28939.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3950.	34.	0.98
NITROGEN	51429.	LOSS	4.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED CREEK (C-1)	0.045	7.3	0.240	2.119	39.	433.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - CARRIGAN LAKE (HYPEREUTROPHIC)
COUNTY - WRIGHT
STORET NO. - 2714 WORKING PAPER NO. 139. NTIS ACCESSION NO. PB-243 771/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	0.66	••••••	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
185.	590.	0.3	1.215	0.785	0.290	••••••

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
84.3	13.2	(6/30/72) N	(8/29/72) N	(10/26/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/ 3/72 GENERA	COUNT	8/29/72 GENERA	COUNT	10/26/72 GENERA	COUNT
DINOBRYON	5036	ANABAENA	21818	CYCLOTELLA	35152
MALLOMONAS	344	MERISMOPEDIA	2727	DINOBRYON	5758
SCHROEDERIA	226	ANACYSTIS(MICROCYSTIS)	454	FLAGELLATES	5303
COCCONEIS	45	MALLOMONAS	454	CHYPTOMONAS	606
FRAGILARIA	18	NITZSCHIA	182	DICTYOSPHAERIUM	1364
OTHER	0	OTHER	1	OTHER	3787
TOTAL	5669	TOTAL	25636	TOTAL	51970

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - CASS LAKE (MESOTROPHIC)
COUNTY - BELTRAMI, CASS
STORET NO. - 2715 WORKING PAPER NO. 92. NTIS ACCESSION NO. PB-240 202/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	2926.70	63.12	7.6	17.8	313.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
140.	280.	1.9	0.020	0.009	0.140	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
8.7	**********	(7/11/72) P	(9/17/72) P	(10/21/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/11/72 GENERA	COUNT	9/ 4/72 GENERA	COUNT	10/21/72 GENERA	COUNT
DINOBRYON	593	ANACYSTIS(MICROCYSTIS)	2495	FRAGILARIA	2415
ANABAENA	441	ANABAENA	452	DINOBRYON	1849
CYCLOTELLA	116	DINOBRYON	434	FLAGELLATES	1358
SYNEDRA	87	CHROOCOCCUS	380	SCENEDESMUS	1358
ANACYSTIS(MICROCYSTIS)	80	FLAGELLATES	163	MELOSIRA	1019
OTHER	333	OTHER	922	OTHER	3284
TOTAL	1650	TOTAL	4846	TOTAL	11283

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	8966.	**********	**********	13261.	22227.
NITROGEN	46390.	**********	**********	505968.	552358.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	8118.	63.	0.35
NITROGEN	450798.	18.	8.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MISSISSIPPI RIVER	11.9	1895.9	0.048	0.923	4.	146.
PIKE BAY OUTLET	0.6	97.6	0.024	0.846	5.	219.
KITCHI LAKE OUTLET	4.8	782.2	0.028	0.854	4.	157.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - CLEARWATER LAKE (EUTROPHIC)
COUNTY - WRIGHT, STEARNS
STORET NO. - 2716 WORKING PAPER NO. 93. NTIS ACCESSION NO. PB-239 574/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	450.66	12.88	5.2	1.5	1.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
153.	358.	1.6	0.028	0.014	0.145	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(7/ 3/72) N	(8/29/72) N	(10/27/72) N
14.1	**********			

SUMMARY OF PHYTOPLANKTON DATA

7/ 3/72 GENERA	COUNT	8/29/72 GENERA	COUNT	10/27/72 GENERA	COUNT
DINOBRYON	877	ANABAENA	789	CHROOCOCCUS	26181
ANABAENA	217	DINOBRYON	738	FLAGELLATES	3417
OOCYSTIS	181	MELOSIRA	195	MELOSIRA	1357
CYCLOTELLA	154	ANACYSTIS(MICROCYSTIS)	181	ANABAENA	1106
FRAGILARIA	145	CRYPTOMONAS	65	DINOBRYON	754
OTHER	189	OTHER	261	OTHER	3667
TOTAL	1763	TOTAL	2229	TOTAL	36482

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3138.	**********	59.	5433.	8630.
NITROGEN	9152.	**********	2227.	95782.	107161.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2036.	76.	0.67
NITROGEN	59188.	45.	8.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CLEARWATER RIVER	0.9	259.0	0.251	2.205	16.	205.
THREE MILE CREEK	0.2	43.5	0.056	1.326	5.	164.
UNNAMED CREEK (E2)	0.2	55.9	0.154	1.863	7.	158.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - COKATO LAKE (EUTROPHIC)
COUNTY - WRIGHT
STORET NO. - 2719 WORKING PAPER NO. 94. NTIS ACCESSION NO. PB-239 575/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	116.55	2.20	7.6	0.5	413.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
225.	543.	1.9	0.231	0.218	1.075	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/30/72) N	(8/29/72) N	(10/26/72) N
10.7	**********			

SUMMARY OF PHYTOPLANKTON DATA

6/30/72 GENERA	COUNT	8/29/72 GENERA	COUNT	10/26/72 GENERA	COUNT
ANABAENA	4991	CYCLOTELLA	30	FLAGELLATES	1566
MELOSIRA	127	ANABAENA	19	CHROOCOCCUS	837
MALLOMONAS	36	CRYPTOMONAS	10	MELOSIRA	837
		PINNULARIA	8	ANABAENA	723
		FLAGELLATES	7	CYCLOTELLA	512
OTHER	18	OTHER	48	OTHER	2091
TOTAL	5172	TOTAL	122	TOTAL	6566

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1551.	**********	9.	4159.	5719.
NITROGEN	5497.	**********	372.	54367.	60236.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3202.	44.	2.60
NITROGEN	40304.	33.	27.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SUCKER CREEK	0.3	83.9	0.485	3.994	41.	435.
UNNAMED STREAM (C1)	0.048	13.7	0.202	4.626	22.	512.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - CRANBERRY LAKE (EUTROPHIC)
COUNTY - CROW WING
STORET NO. - 2720 WORKING PAPER NO. 136. NTIS ACCESSION NO. PB-243 902/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	0.08	******	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
42.	110.	1.2	0.027	0.017	0.190	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
30.1	**********	(7/ 2/72) N	(9/ 4/72) P	(10/24/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/ 2/72 GENERA	COUNT	9/ 4/72 GENERA	COUNT	10/24/72 GENERA	COUNT
FLAGELLATES	9140	OSCILLATORIA	1989	ANABAENA	1759
SYNEDRA	1448	ANACYSTIS(MICROCYSTIS)	922	SCENEDESMUS	1281
FRAGILARIA	1448	MELOSIRA	199	FLAGELLATES	955
CRYPTOMONAS	498	ANABAENA	199	PEDIASTRUM	678
DINOBRYON	226	FLAGELLATES	199	DINOBRYON	502
OTHER	588	OTHER	760	OTHER	1383
TOTAL	13348	TOTAL	4268	TOTAL	6558

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - ELBOW LAKE (EUTROPHIC)
COUNTY - ST. LOUIS
STORET NO. - 2725 WORKING PAPER NO. 97. NTIS ACCESSION NO. PB-239 577/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	16.32	0.69	3.1	0.1	296.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
38.	278.	1.9	1.380	1.260	0.480	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(7/ 8/72) N	(9/ 9/72) N	(10/19/72) N
9.6	47.6			

SUMMARY OF PHYTOPLANKTON DATA

7/ 8/72 GENERA	COUNT	9/ 9/72 GENERA	COUNT	10/19/72 GENERA	COUNT
ANABAENA	3960	ANABAENA	1733	FLAGELLATES	1601
SCHROEDERIA	470	DINOBRYON	30	FRAGILARIA	565
CHROOCOCCUS	54	MELOSIRA	15	ANABAENA	527
MALLOMONAS	54	NAVICULA	8	MELOSIRA	490
FLAGELLATES	36	EPITHEMIA	8	APHANOTHECE	264
OTHER	0	OTHER	45	OTHER	1186
TOTAL	4574	TOTAL	1839	TOTAL	4633

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	5351.	**********	**********	95.	5447.
NITROGEN	16059.	**********	**********	4163.	20222.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1828.	66.	7.87
NITROGEN	6295.	69.	29.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED CREEK (A-1)	0.062	11.9	2.377	9.198	5.	220.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - EMMARRASS LAKE (EUTROPHIC)
COUNTY - ST. LOUIS
STORET NO. - 2728 WORKING PAPER NO. 98. NTIS ACCESSION NO. PB-239 704/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	389.54	2.05	2.6	2.8	22.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
37.	130.	1.0	0.025	0.013	0.200	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
4.9	**********	(7/ 8/72) N	(9/ 9/72) P	(10/19/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/ 8/72 GENERA	COUNT	9/ 9/72 GENERA	COUNT	10/19/72 GENERA	COUNT
TABELLARIA	3263	DINOBRYON	398	FLAGELLATES	2462
ASTERIONELLA	967	MELOSIRA	133	DINOBRYON	1131
FLAGELLATES	544	PHACUS	108	CRYPTOMONAS	427
ELAKATOTHRIX	362	CYCLOTELLA	72	MELOSIRA	402
DINOBRYON	242	FRAGILARIA	66	ACHNANTHES	251
OTHER	665	OTHER	495	OTHER	930
TOTAL	6043	TOTAL	1272	TOTAL	5603

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1683.	**********	9.	1810.	3501.
NITROGEN	5043.	**********	376.	104068.	109487.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3587.	LOSS	1.71
NITROGEN	82195.	25.	53.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
DIVERSION CHANNEL	2.7	367.8	0.022	1.259	4.	264.
UNNAMED CREEK (B-1)	0.062	11.9	2.377	9.198	5.	220.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - FALL LAKE (MESOTROPHIC)
COUNTY - LAKE
STORET NO. - 2730 WORKING PAPER NO. 116. NTIS ACCESSION NO. PB-243 834/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	8.79	4.0	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
14.	50.	1.6	0.020	0.011	0.120	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(7/ 8/72) N	(9/ 7/72) N	(10/22/72) N
7.2	**********			

SUMMARY OF PHYTOPLANKTON DATA

7/ 8/72 GENERA	COUNT	9/ 7/72 GENERA	COUNT	10/22/72 GENERA	COUNT
MELOSIRA	633	MELOSIRA	434	MELOSIRA	1340
TABELLARIA	271	LYNGBYA	325	FLAGELLATES	361
FRAGILARIA	192	KIRCHNERIELLA	144	DINOBRYON	361
ANABAENA	170	TABELLARIA	144	FRAGILARIA	256
MELOSIRA	127	DINOBRYON	132	ASTERIONELLA	136
ASTERIONELLA	90				
OTHER	257	OTHER	676	OTHER	618
TOTAL	1740	TOTAL	1855	TOTAL	3072

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - GULL LAKE (SOUTH BASIN) (EUTROPHIC)
COUNTY - CASS,CROW WING
STORET NO. - 2737 WORKING PAPER NO. 102. NTIS ACCESSION NO. PB-243 832/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	766.64	38.61	9.1	3.8	2.9

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
106.	208.	2.3	0.022	0.011	0.150	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
12.5	2.4	(7/ 2/72) P	(9/ 5/72) P	(10/24/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/ 2/72 GENERA	COUNT	9/ 5/72 GENERA	COUNT	10/24/72 GENERA	COUNT
TABELLARIA	1392	ANACYSTIS(MICROCYSTIS)	714	FLAGELLATES	2906
ANACYSTIS(MICROCYSTIS)	958	ANABAENA	542	DINOBRYON	1358
FRAGILARIA	416	DINOBRYON	443	FRAGILARIA	981
OOCYSTIS	307	LYNGBYA	344	ANABAENA	868
FLAGELLATES	271	APHANOCAPSA	316	CHROOCOCCUS	490
OTHER	688	OTHER	498	OTHER	2831
TOTAL	4031	TOTAL	2857	TOTAL	9434

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	150.	3519.	3669.
NITROGEN	**********	**********	5701.	136263.	141963.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2290.	38.	0.10
NITROGEN	87560.	38.	3.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
DADE LAKE CONNECTION	0.1	22.0	0.017	0.849	2.	117.
UPPER GULL CONNECTION	2.8	518.0	0.027	0.821	5.	139.
ROUND LAKE CONNECTION	0.6	136.2	0.014	0.658	2.	86.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - HERON LAKE (EUTROPHIC)
COUNTY - JACKSON
STORET NO. - 2739 WORKING PAPER NO. 103. NTIS ACCESSION NO. PB-241 812/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	1222.48	33.39	0.9	2.6	135.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
128.	908.	0.3	0.302	0.154	0.135	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
		(7/ 1/72) N	(8/30/72) N
111.1	**********		

SUMMARY OF PHYTOPLANKTON DATA

7/ 1/72 GENERA	COUNT	8/30/72 GENERA	COUNT
OSCILLATORIA	13575	OSCILLATORIA	7602
FRAGILARIA	815	MERISMOPEDIA	996
SYNEDRA	317	CRYPTOMONAS	362
NAVICULA	226	CYCLOTELLA	362
CRYPTOMONAS	226	FLAGELLATES	272
OTHER	452	OTHER	768
TOTAL	15611	TOTAL	10362

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	14082.	**********	**********	20535.	34617.
NITROGEN	42254.	**********	**********	512054.	554308.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	22426.	35.	1.04
NITROGEN	341787.	38.	16.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
DUCK LAKE OUTLET	0.037	19.7	0.407	5.444	23.	318.
JACK CREEK	1.2	556.8	0.217	5.728	13.	361.
OKABENA CREEK	0.9	414.4	0.806	8.538	24.	480.
DITCH J-3 (E-1)	0.2	73.8	0.215	10.657	11.	338.
UNNAMED STREAM(F-1)	0.020	9.3	0.116	10.436	10.	635.
LAKE FLAHERTY OUTLET	0.040	19.4	0.256	6.413	14.	378.
TEAL LAKE OUTLET	0.020	9.8	0.099	4.676	6.	275.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LEECH LAKE (MESOTROPHIC)
COUNTY - CASS
STORET NO. - 2746 WORKING PAPER NO. 105. NTIS ACCESSION NO. PB-239 708/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	2697.60	453.26	4.7	13.1	5.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
132.	260.	2.2	0.015	0.009	0.130	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
6.2	0.5	(7/11/72) P	(9/ 8/72) P	(10/21/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/11/72 GENERA	COUNT	9/ 8/72 GENERA	COUNT	10/21/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	3418	ANACYSTIS(MICROCYSTIS)	1685	FLAGELLATES	3367
CHROOCUCCUS	778	LYNGBYA	1338	DINOBRYON	2764
FRAGILARIA	778	ANABAENA	383	ANACYSTIS(MICROCYSTIS)	1859
DINOBRYON	416	APHANOCAPSA	210	LYNGBYA	1055
ANABAENA	325	DINOBRYON	181	FRAGILARIA	704
OTHER	2495	OTHER	484	OTHER	3065
TOTAL	8210	TOTAL	4281	TOTAL	12814

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1751.	**********	5.	16209.	17964.
NITROGEN	5261.	**********	181.	1071065.	1076507.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	8222.	54.	0.04
NITROGEN	525170.	51.	2.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BOY RIVER	5.7	1036.0	0.020	1.728	4.	300.
PORTAGE LAKE	0.2	42.0	0.044	1.421	7.	219.
SUCKER CREEK	0.3	66.0	0.027	1.247	4.	186.
STEAMBOAT LAKE	1.8	336.7	0.016	1.368	3.	231.
SWAMP LAKE	0.1	30.6	0.026	1.645	4.	250.
KABEKONA BAY	2.0	365.2	0.016	1.391	3.	238.
SHINGOBEE CREEK	0.3	73.6	0.061	1.268	9.	190.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LILY LAKE
COUNTY - BLUE EARTH
STORET NO. - 2747

(EUTROPHIC)

WORKING PAPER NO. 107. NTIS ACCESSION NO. PB-240 520/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	112.92	0.57	0.9	0.3	20.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
184.	533.	0.3	0.607	0.297	0.235	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
		(7/ 1/72) N	(8/30/72) N
229.1	**********		

SUMMARY OF PHYTOPLANKTON DATA

7/ 1/72 GENERA	COUNT	8/30/72 GENERA	COUNT
OSCILLATORIA	24728	CYCLOTELLA	16362
SCENEDESMUS	7817	MELOSIRA	11544
FLAGELLATES	6362	OSCILLATORIA	9273
CYCLOTELLA	4000	GLOEOCAPSA	7273
GLOEOCAPSA	3635	NITZSCHIA	5273
OTHER	14913	OTHER	9455
TOTAL	61455	TOTAL	59180

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2036.	**********	**********	1746.	3782.
NITROGEN	6821.	**********	**********	87179.	94000.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	5651.	LOSS	6.58
NITROGEN	98943.	LOSS	163.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
MINNEOPA CREEK	0.2	79.8	0.210	9.842	16.	775.
COUNTY DITCH NO. 50	0.071	26.9	0.193	9.586	14.	757.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LITTLE LAKE (HYPEREUTROPHIC)
COUNTY - GRANT
STORET NO. - 2748 WORKING PAPER NO. 120. NTIS ACCESSION NO. PB-243 891/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	0.28	******	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
200.	790.	1.1	0.930	0.765	0.200	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
58.8	15.8	(7/ 6/72) N	(9/ 2/72) N	(10/25/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/ 6/72 GENERA	COUNT	9/ 2/72 GENERA	COUNT	10/25/72 GENERA	COUNT
MERISMOPEDIA	2750	DICTYOSPHAERIUM	9474	CYCLOTELLA	10152
ANACYSTIS(MICROCYSTIS)	1621	MERISMOPEDIA	6466	FLAGELLATES	6364
FRAGILARIA	796	APHANOCAPSA	4436	ANACYSTIS(MICROCYSTIS)	4242
FLAGELLATES	449	ANACYSTIS(MICROCYSTIS)	3083	FRAGILARIA	2273
CHROOCUCCUS	232	FLAGELLATES	2632	CHROOCOCCUS	1970
OTHER	737	OTHER	5864	OTHER	6060
TOTAL	6585	TOTAL	31955	TOTAL	31061

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - MADISON LAKE (EUTROPHIC)
COUNTY - BLUE EARTH
STORET NO. - 2750 WORKING PAPER NO. 108. NTIS ACCESSION NO. PB-240 519/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	61.64	4.50	4.0	0.2	3.3

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
131.	385.	0.9	0.050	0.020	0.680	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
38.8	3.8	(7/ 1/72) N	(8/30/72) N	(10/29/72) P

SUMMARY OF PHYTOPLANKTON DATA

7/ 1/72 GENERA	COUNT	8/30/72 GENERA	COUNT	10/24/72 GENERA	COUNT
LYNGBYA	7444	LYNGBYA	6113	ANABAENA	5075
ANABAENA	4060	DICTYOSPHAERIUM	1623	CHROOCUCCUS	1357
FLAGELLATES	2782	MERISMOPEDIA	1358	SYNEDRA	704
ANACYSTIS(MICROCYSTIS)	677	FLAGELLATES	1207	CRYPTOMONAS	653
RAPHIDIOPSIS	602	ANABAENA	566	KIRCHNERIELLA	502
OTHER	4435	OTHER	2605	OTHER	2965
TOTAL	20000	TOTAL	13472	TOTAL	11256

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	45.	667.	889.	1601.
NITROGEN	**********	63.	1995.	48218.	50277.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	385.	76.	0.36
NITROGEN	19351.	62.	11.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED STREAM A-1	0.2	61.6	0.080	3.809	6.	314.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - MALMEDAL LAKE (EUTROPHIC)
COUNTY - POPE
STORET NO. - 2752 WORKING PAPER NO. 109. NTIS ACCESSION NO. PB-240 518/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	21.50	0.79	1.8	0.0	1.3

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
180.	563.	0.4	0.125	0.030	0.395	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
41.0	7.4	(7/ 6/72) N	(9/ 1/72) N	(10/25/72) P

SUMMARY OF PHYTOPLANKTON DATA

7/ 6/72 GENERA	COUNT	9/ 1/72 GENERA	COUNT	10/25/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	2651	MELOSIRA	16061	OSCILLATORIA	1973
OSCILLATORIA	2440	ANACYSTIS(MICROCYSTIS)	11364	ANABAENA	1732
CLOSTERIUM	2199	LYNGBYA	4848	ANACYSTIS(MICROCYSTIS)	1611
MELOSIRA	1566	OSCILLATORIA	4545	DINOBRYON	422
CYCLOTELLA	1084	FLAGELLATES	4394	LYNGBYA	271
OTHER	6385	OTHER	16212	OTHER	2093
TOTAL	16325	TOTAL	57424	TOTAL	8102

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	136.	**********	**********	82.	218.
NITROGEN	422.	**********	**********	3429.	3850.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	544.	LOSS	0.28
NITROGEN	3333.	13.	4.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
COUNTY DITCH NO. 7	0.017	10.9	0.131	5.018	3.	178.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - MASHKENODE LAKE (EUTROPHIC)
COUNTY - ST. LOUIS
STORET NO. - 2756 WORKING PAPER NO. 111. NTIS ACCESSION NO. PB-240 516/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	45.58	0.41	2.1	0.3	40.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
101.	300.	1.0	0.075	0.022	0.145	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
25.3	2.6	(7/10/72) N	(9/ 9/72) N	(10/19/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/10/72 GENERA	COUNT	9/ 9/72 GENERA	COUNT	10/19/72 GENERA	COUNT
CYCLOTELLA	904	ANACYSTIS(MICROCYSTIS)	6396	CYCLOTELLA	15639
OOCYSTIS	832	APHANOCAPSA	5766	FLAGELLATES	2632
ASTERIONELLA	687	PERIDINIUM	2432	FRAGILARIA	2030
FRAGILARIA	452	DICTYOSPHAERIUM	1261	CYLINDROCYSTIS	1654
FLAGELLATES	307	ANABAENA	811	ANABAENA	827
OTHER	1321	OTHER	2793	OTHER	4286
TOTAL	4503	TOTAL	19459	TOTAL	27068

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1932.	**********	**********	268.	2200.
NITROGEN	5787.	**********	**********	10313.	16100.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	567.	74.	5.38
NITROGEN	7066.	56.	39.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED STREAM (8-1)	0.2	43.3	0.036	1.313	6.	220.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - MCQUADE LAKE (EUTROPHIC)
COUNTY - ST. LOUIS
STORET NO. - 2757 WORKING PAPER NO. 112. NTIS ACCESSION NO. PB-240 515/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	64.23	0.66	2.7	0.4	57.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
60.	145.	1.4	0.040	0.020	0.130	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
10.7	**********	(7/ 8/72) N	(9/ 9/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/ 8/72 GENERA	COUNT	9/ 9/72 GENERA	COUNT
DINOBRYON	2754	ANABAENA	442
ANABAENA	1920	MELOSIRA	382
ANACYSTIS(MICROCYSTIS)	1087	TABELLARIA	291
CRYPTOMONAS	435	CRYPTOMONAS	281
TABELLARIA	326	ANACYSTIS(MICROCYSTIS)	221
OTHER	869	OTHER	803
TOTAL	7391	TOTAL	2420

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	367.	**********	**********	426.	794.
NITROGEN	1107.	**********	**********	23088.	24195.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	562.	29.	1.20
NITROGEN	21206.	12.	36.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED CREEK (B1)	0.3	58.8	0.076	2.131	6.	353.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LAKE MINNETONKA (EUTROPHIC)
COUNTY - HENNEPIN
STORET NO. - 2760 WORKING PAPER NO. 142. NTIS ACCESSION NO. PB-243 904/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	58.56	6.9	**********	15.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
130.	360.	1.4	0.047	0.018	0.260	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
16.6	1.2	(6/29/72) N	(9/ 5/72) P	(10/29/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/29/72 GENERA	COUNT	9/ 5/72 GENERA	COUNT	10/29/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	2767	ANABAENA	1844	ANABAENA	1962
ANABAENA	1356	ANACYSTIS(MICROCYSTIS)	741	DINOBRYON	1358
DINOBRYON	380	DICTYOSPHAERIUM	271	MELOSIRA	528
CHROOCOCCUS	362	COELOSPHAERIUM	271	FRAGILARIA	453
FLAGELLATES	289	MELOSIRA	217	SCENEDESMUS	415
OTHER	651	OTHER	833	OTHER	1208
TOTAL	5805	TOTAL	4177	TOTAL	5924

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - LAKE MINNEWASKA (EUTROPHIC)
COUNTY - POPE
STORET NO. - 2761 WORKING PAPER NO. 114. NTIS ACCESSION NO. PB-240 297/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	227.92	28.77	6.0	0.4	12.7

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
220.	640.	1.7	0.035	0.017	0.140	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
7.6	**********	(7/ 6/72) N	(9/ 1/72) P	(10/25/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/ 6/72 GENERA	COUNT	9/ 1/72 GENERA	COUNT	10/25/72 GENERA	COUNT
DINOBRYON	1031	ANACYSTIS(MICROCYSTIS)	5797	FRAGILARIA	3268
ANACYSTIS(MICROCYSTIS)	940	MERISMOPEDIA	616	ASTERIONELLA	1205
FRAGILARIA	850	APHANOCAPSA	543	DINOBRYON	602
ANABAENA	796	DINOBRYON	290	ANACYSTIS(MICROCYSTIS)	331
MELOSIRA	380	ANABAENA	181	GOMPHOSPHAERIA	226
OTHER	687	OTHER	1015	OTHER	512
TOTAL	4684	TOTAL	8442	TOTAL	6144

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2930.	**********	177.	1129.	4236.
NITROGEN	8789.	**********	6571.	50984.	66345.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	426.	90.	0.15
NITROGEN	14181.	79.	2.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED DITCH (B-1)	0.014	6.7	1.656	5.387	3.	100.
PELICAN LAKE OUTLET	0.2	119.7	0.059	1.851	3.	100.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - PELICAN LAKE (MESOTROPHIC)
COUNTY - ST. LOUIS
STORET NO. - 2765 WORKING PAPER NO. 118. NTIS ACCESSION NO. PB-240 311/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	179.49	44.29	2.4	1.0	3.3

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
35.	89.	1.7	0.032	0.011	0.150	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
11.4	**********	(7/10/72) P	(9/ 7/72) P	(10/22/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/10/72 GENERA	COUNT	9/ 7/72 GENERA	COUNT	10/22/72 GENERA	COUNT
FLAGELLATES	362	ANACYSTIS(MICROCYSTIS)	4910	FLAGELLATES	843
ANABAENA	354	MELOSIRA	934	DINOBRYON	738
ANACYSTIS(MICROCYSTIS)	271	ANABAENA	873	ANACYSTIS(MICROCYSTIS)	407
CHROOCOCCUS	181	TABELLARIA	632	ASTERIONELLA	331
MERISMOPEDIA	136	APHANOCAPSA	542	CRYPTOMONAS	75
OTHER	670	OTHER	2591	OTHER	603
TOTAL	1974	TOTAL	10482	TOTAL	2997

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	358.	**********	73.	2086.	2517.
NITROGEN	1070.	**********	2780.	82417.	86268.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1347.	46.	0.06
NITROGEN	34277.	60.	1.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SUCKER CREEK	0.1	19.2	0.052	1.358	10.	257.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - RABBIT LAKE (EUTROPHIC)
COUNTY - CROW WING
STORET NO. - 2771 WORKING PAPER NO. 99. NTIS ACCESSION NO. PB-239 703/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	2.15	7.2	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
106.	280.	2.7	0.028	0.012	0.100	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
6.7	**********	(7/ 2/72) N	(9/ 4/72) P	(10/24/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/ 2/72 GENERA	COUNT	9/ 4/72 GENERA	COUNT	10/24/72 GENERA	COUNT
DINOBRYON	416	ANACYSTIS(MICROCYSTIS)	1248	ANABAENA	1962
FLAGELLATES	386	FLAGELLATES	190	MELOSIRA	1623
ANABAENA	145	FRAGILARIA	108	FRAGILARIA	1509
ANACYSTIS(MICROCYSTIS)	139	APHANOCAPSA	108	CHROOCOCCUS	792
ELAKATOTHRIX	60	ANABAENA	99	FLAGELLATES	283
OTHER	246	OTHER	290	OTHER	3039
TOTAL	1392	TOTAL	2043	TOTAL	9208

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - ST.LOUIS BAY (EUTROPHIC)
COUNTY - ST.LOUIS, (MN); DOUGLAS, (WI)
STORET NO. - 2776 WORKING PAPER NO. 123. NTIS ACCESSION NO. PB-242 538/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	9564.09	9.79	3.4	67.9	6.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
39.	160.	0.4	0.216	0.161	0.820	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
4.7	27.2	(7/13/72) N	(9/ 7/72) N	(10/18/72) N

SUMMARY OF PHYTOPLANKTON DATA

9/ 6/72 GENERA	COUNT	10/18/72 GENERA	COUNT
FLAGELLATES	85	FLAGELLATES	1583
DINOBRYON	67	SYNEDRA	979
CRYPTOMONAS	20	ANABAENA	930
CHROOCOCCUS	18	MELOSIRA	904
SYNEDRA	18	CHROOCOCCUS	377
OTHER	81	OTHER	1257
TOTAL	289	TOTAL	6030

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	156349.	**********	**********	162122.	318472.
NITROGEN	543528.	**********	**********	2953785.	3497313.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	226553.	29.	32.53
NITROGEN	3467383.	1.	357.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ST. LOUIS RIVER	67.4	9505.3	0.087	1.414	17.	308.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - SILVER LAKE (EUTROPHIC)
COUNTY - MCLEOD
STORET NO. - 2782 WORKING PAPER NO. 125. NTIS ACCESSION NO. PB-240 312/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	5.70	1.71	1.2	0.0	2.3

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
186.	480.	0.3	0.600	0.310	0.360	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(7/ 3/72) N	(8/29/72) N	(10/26/72) N
126.1	25.9			

SUMMARY OF PHYTOPLANKTON DATA

7/ 3/72 GENERA	COUNT	8/29/72 GENERA	COUNT	10/26/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	29189	OSCILLATORIA	26727	OSCILLATORIA	25714
ANABAENA	21982	LYNGBYA	22727	FLAGELLATES	8797
LYNGBYA	11622	MERISMOPEDIA	9091	ANACYSTIS(MICROCYSTIS)	2256
MERISMOPEDIA	7387	ANACYSTIS(MICROCYSTIS)	5636	ANABAENA	526
CHROOCOCCUS	3514	FLAGELLATES	4909	DINOBRYON	526
OTHER	9099	OTHER	9637	OTHER	1730
TOTAL	82793	TOTAL	78727	TOTAL	39549

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	789.	**********	**********	118.	907.
NITROGEN	2358.	**********	**********	3837.	6195.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	662.	27.	0.53
NITROGEN	4240.	32.	3.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SILVER LAKE CREEK	0.028	5.7	0.729	4.683	116.	744.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - SIX MILE LAKE (EUTROPHIC)
COUNTY - ST. LOUIS
STORET NO. - 2783 WORKING PAPER NO. 126. NTIS ACCESSION NO. PB-240 512/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	38.33	0.34	1.9	0.2	36.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
127.	320.	0.9	0.235	0.151	0.095	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
21.0	**********	(7/ 8/72) N	(9/ 9/72) N

SUMMARY OF PHYTOPLANKTON DATA

GENERA	7/ 8/72 COUNT	GENERA	9/ 9/72 COUNT
CYCLOTELLA	8855	ANABAENA	4262
CRYPTOMONAS	1446	STEPHANODISCUS	1698
ANACYSTIS(MICROCYSTIS)	723	CRYPTOMONAS	1321
COCCONEIS	663	FLAGELLATES	1094
KIRCHNERIELLA	542	DINOBRYON	755
OTHER	3072	OTHER	1034
TOTAL	15301	TOTAL	10164

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1533.	**********	**********	195.	1728.
NITROGEN	4594.	**********	**********	8707.	13302.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	766.	56.	5.08
NITROGEN	15256.	LOSS	39.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED STREAM(A-1)	0.1	19.2	0.049	1.609	5.	219.
UNNAMED STREAM(C-1)	0.091	16.3	0.246	2.913	5.	219.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - SUPERIOR BAY (EUTROPHIC)
COUNTY - ST. LOUIS, (MN); DOUGLAS, (WI)
STORET NO. - 2786 WORKING PAPER NO. 128, NTIS ACCESSION NO. PB-242 568/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	10828.52	14.69	3.8	82.6	8.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
44.	130.	0.6	0.079	0.044	0.440	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
6.2	**********	(7/13/72) N	(9/ 7/72) N	(10/18/72) P

SUMMARY OF PHYTOPLANKTON DATA

7/13/72 GENERA	COUNT	9/ 7/72 GENERA	COUNT	10/18/72 GENERA	COUNT
MELOSIRA	1646	FLAGELLATES	85	FLAGELLATES	2340
ACHNANTHES	633	DINOBRYON	67	DINOBRYON	2260
ULOTHRIX	434	CRYPTOMONAS	20	ANABAENA	755
ANABAENA	380	CHROOCOCCUS	18	FRAGILARIA	520
CRYPTOMONAS	362	SYNEDRA	18	KIRCHNERIELLA	490
OTHER	722	OTHER	81	OTHER	2495
TOTAL	4177	TOTAL	289	TOTAL	8868

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	148399.	**********	**********	204653.	353052.
NITROGEN	649497.	**********	**********	3552790.	4202286.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	144259.	59.	24.03
NITROGEN	2890381.	31.	286.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ST.LOUIS BAY OUTLET	67.9	9557.1	0.106	1.620	12.	306.
NEMADJI RIVER	13.4	1150.0	0.205	1.349	1.	5.
BLUFF CREEK	0.6	50.8	0.118	1.338	1645.	11004.
BEAR CREEK	0.2	17.9	0.332	1.332	116.	1332.
UNNAMED STREAM (C-1)	0.1	12.7	0.184	1.558	153.	640.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - SWAN LAKE (MESOTROPHIC)
COUNTY - ITASCA
STORET NO. - 2788 WORKING PAPER NO. 129. NTIS ACCESSION NO. PB-240 510/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	293.45	10.58	12.1	1.7	2.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
79.	190.	2.9	0.013	0.009	0.080	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
3.8	2.0	(7/12/72) P (9/ 9/72) P (10/22/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/12/72 GENERA	COUNT	9/ 9/72 GENERA	COUNT	10/22/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	1103	ANACYSTIS(MICROCYSTIS)	600	FLAGELLATES	1533
ANABAENA	452	DINOBRYON	398	ANABAENA	1382
FLAGELLATES	253	MELOSIRA	282	CHROOCOCCUS	1231
DINOBRYON	190	FLAGELLATES	116	FRAGILARIA	427
CYCLOTELLA	90	CYCLOTELLA	51	DINOBRYON	352
OTHER	290	OTHER	325	OTHER	2110
TOTAL	2378	TOTAL	1772	TOTAL	7035

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3193.	**********	95.	1687.	4975.
NITROGEN	9741.	**********	3624.	67710.	81075.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1052.	79.	0.41
NITROGEN	33565.	59.	7.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
HAY CREEK	0.4	65.0	0.045	1.535	8.	283.
O'BRIEN CREEK	0.7	111.1	0.082	1.467	5.	187.
PICKEREL CREEK	0.017	3.1	0.029	1.284	4.	209.
SAMIDE CREEK	0.099	19.9	0.029	1.739	3.	272.
SNOWBALL CREEK	0.093	17.1	0.027	0.763	**********	**********
UNNAMED CREEK(B-1)	0.2	32.4	0.018	0.744	3.	142.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - TRACE LAKE (EUTROPHIC)
COUNTY - TODD
STORET NO. - 2792 WORKING PAPER NO. 130. NTIS ACCESSION NO. PB-240 509/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	4.14	1.12	******	0.0	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
206.	420.	1.1	1.130	0.088	1.080	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
18.7	**********	(7/ 6/72) N	(9/ 2/72) N	(10/24/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/ 6/72 GENERA	COUNT	9/ 2/72 GENERA	COUNT	10/24/72 GENERA	COUNT
ANABAENA	10725	ANABAENA	1446	DINOBRYON	2075
DINOBRYON	1594	DINOBRYON	542	FRAGILARIA	2000
SCHROEDERIA	254	LYNGBYA	70	FLAGELLATES	1094
COCCONEIS	181	ANACYSTIS(MICROCYSTIS)	30	ANABAENA	906
CYCLOTELLA	181	SYNEDRA	10	CRYPTOMONAS	302
OTHER	72	OTHER	0	OTHER	1774
TOTAL	13007	TOTAL	2098	TOTAL	8151

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	367.	**********	**********	50.	417.
NITROGEN	1107.	**********	**********	2005.	3111.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	91.	78.	0.37
NITROGEN	780.	75.	2.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED STREAM (A1)	0.008	4.1	0.294	2.562	22.	188.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN MINNESOTA

NAME - TROUT LAKE (EUTROPHIC)
COUNTY - ITASCA
STORET NO. - 2793 WORKING PAPER NO. 131. NTIS ACCESSION NO. PB-240 508/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	41.96	7.65	15.2	0.2	17.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
119.	320.	2.8	0.050	0.040	0.080	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
7.8	1.6	(7/11/72) N	(9/ 8/72) N	(10/22/72) N

SUMMARY OF PHYTOPLANKTON DATA

7/11/72 GENERA	COUNT	9/ 8/72 GENERA	COUNT	10/22/72 GENERA	COUNT
DINOBRYON	2333	ANACYSTIS(MICROCYSTIS)	2542	DINOBRYON	2151
FLAGELLATES	850	DINOBRYON	325	FLAGELLATES	1283
ANACYSTIS(MICROCYSTIS)	669	ANABAENA	132	ASTERIONELLA	1170
ANABAENA	307	CHROOCOCCUS	96	MELOSIRA	906
CHROOCOCCUS	199	MELOSIRA	48	ANABAENA	792
OTHER	380	OTHER	170	OTHER	3245
TOTAL	4738	TOTAL	3313	TOTAL	9547

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2204.	**********	9.	290.	2503.
NITROGEN	6612.	**********	331.	14608.	21551.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	200.	92.	0.33
NITROGEN	6168.	71.	2.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED STREAM (A1)	0.017	3.9	0.018	0.726	2.	62.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW HAMPSHIRE

NAME - POWDER MILL POND (EUTROPHIC)
COUNTY - HILLSBOROUGH
STORET NO. - 3302 WORKING PAPER NO. 14. NTIS ACCESSION NO. PB-239 660/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	372.96	1.51	2.5	6.7	6.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	65.	1.2	0.033	0.016	0.170	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
6.2	0.2	(6/ 2/72) N	(8/ 5/72) N	(10/ 4/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/ 2/72 GENERA	COUNT	8/ 5/72 GENERA	COUNT	10/ 4/72 GENERA	COUNT
NAVICULA	108	CYCLOTELLA	189	FLAGELLATES	2214
DINOBRYON	88	FLAGELLATES	151	FRAGILARIA	1160
FRAGILARIA	44	CRYPTOMONAS	66	DINOBRYON	617
FLAGELLATES	42	SYNEDRA	24	MELOSIRA	467
SYNEDRA	36	DINOBRYON	22	CYCLOTELLA	376
OTHER	258	OTHER	139	OTHER	904
TOTAL	576	TOTAL	591	TOTAL	5738

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2540.	**********	5.	2141.	4685.
NITROGEN	11247.	**********	213.	79197.	90657.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	4413.	6.	3.11
NITROGEN	88417.	2.	60.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CONTOOCOOK RIVER	5.0	280.8	0.027	0.460	6.	244.
MOOSE BROOK	0.6	35.7	0.013	0.319	7.	180.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW HAMPSHIRE

NAME - LAKE WINNIPESAUKEE (OLIGOTROPHIC)
COUNTY - BELKNAP, CARROLL
STORET NO. - 3303 WORKING PAPER NO. 11. NTIS ACCESSION NO. PB-239 699/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	940.17	180.44	13.1	10.2	4.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	51.	5.6	0.006	0.004	0.060	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/ 2/72) P	(8/ 6/72) P	(10/ 8/72) P
2.1	0.1			

SUMMARY OF PHYTOPLANKTON DATA

6/ 2/72 GENERA	COUNT	8/ 6/72 GENERA	COUNT	10/ 8/72 GENERA	COUNT
DINOBRYON	922	DINOBRYON	211	DINOBRYON	537
ANABAENA	63	ANABAENA	51	OSCILLATORIA	199
STEPHANODISCUS	50	CRYPTOMONAS	29	ANACYSTIS(MICROCYSTIS)	109
TABELLARIA	23	ANACYSTIS(MICROCYSTIS)	19	FRAGILARIA	84
ANKISTRODESMUS	14	SYNEDRA	17	ACHNANTHES	36
OTHER	31	OTHER	87	OTHER	180
TOTAL	1103	TOTAL	414	TOTAL	1145

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	10005.	**********	1710.	10603.	22317.
NITROGEN	37420.	**********	36313.	413523.	487256.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	5179.	77.	0.12
NITROGEN	135778.	72.	2.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
FRONT-WOLFEBORO BAYS CON	1.9	100.2	0.046	0.756	7.	200.
LK WAUKEWAN-MEREDITH CON	0.6	33.7	0.014	0.381	8.	219.
HAWKINS BROOK	0.2	8.5	0.212	1.054	26.	382.
MEAD BROOK	0.1	0.8	0.017	0.348	12.	239.
PAGE BROOK	0.1	6.2	0.030	0.622	19.	375.
NO NAME (F1)	0.062	3.4	0.018	0.358	9.	210.
LK KANASATKA-BLACKEY CON	0.5	24.6	0.311	0.270	5.	104.
RED MILL RIVER	1.3	66.6	0.016	0.456	10.	277.
NO NAME (M1)	0.028	1.3	0.013	0.534	11.	354.
MALFWAY BROOK	0.1	6.5	0.013	0.807	8.	478.
SHANNON BROOK	0.4	18.1	0.015	0.589	9.	360.
MELVIN RIVER	0.8	42.2	0.018	0.676	10.	411.
WINGATE BROOK	0.1	6.2	0.018	0.593	11.	358.

TWENTY MILE BROOK	0.2	8.8	0.018	0.504	11.	308.
NINETEEN MILE BROOK	0.3	16.6	0.017	0.517	10.	313.
MIRROR-WINTER CONNEC	0.2	8.5	0.014	0.654	8.	401.
RUST-WINNIPESAUKEE CONN	0.1	6.2	0.013	0.343	8.	213.
NO NAME (S1)	0.059	3.1	0.019	0.421	12.	250.
KNIGHTS-WINNIPESAUKEE	0.042	2.1	0.022	0.544	13.	352.
BEAVER BROOK	0.4	20.7	0.017	0.544	10.	329.
HURD BROOK	0.2	9.1	0.020	0.855	12.	309.
MERRY MEETING RIVER	1.4	74.6	0.015	0.493	9.	300.
WATSON BROOK	0.2	8.0	0.017	0.343	11.	210.
ALTON BROOK	0.2	9.8	0.020	0.304	12.	179.
POORFARM BROOK	0.3	16.8	0.024	0.477	15.	286.
GUNSTOCK RIVER	0.5	24.1	0.024	0.626	15.	418.
MEADOW BROOK	0.071	3.6	0.033	0.970	20.	590.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW HAMPSHIRE

NAME - KELLYS FALLS POND (EUTROPHIC)
COUNTY - HILLSBOROUGH
STORET NO. - 3305 WORKING PAPER NO. 13. NTIS ACCESSION NO. PB-239 701/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	564.62	0.52	2.3	8.9	1.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	65.	1.8	0.024	0.015	0.310	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
7.0	0.1	(6/ 2/72) N	(8/ 5/72) N	(10/ 4/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/ 2/72 GENERA	COUNT	8/ 5/72 GENERA	COUNT	10/ 4/72 GENERA	COUNT
DINOBRYON	208	DINOBRYON	1627	FLAGELLATES	522
NAVICULA	124	ANABAENA	1266	MELOSIRA	361
ACHNANTHES	75	CHROOCOCCUS	850	ANABAENA	341
SYNEDRA	69	CYCLOTELLA	832	DINOBRYON	251
FLAGELLATES	51	FRAGILARIA	633	CYCLOTELLA	151
OTHER	308	OTHER	759	OTHER	573
TOTAL	835	TOTAL	5967	TOTAL	2199

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3229.	**********	63.	11728.	15020.
NITROGEN	9855.	**********	2449.	140476.	152780.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	10122.	33.	28.77
NITROGEN	178862.	LOSS	292.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
PISCATAQUOG RIVER	8.7	549.1	0.295	1.111	21.	246.
CATAMOUNT BROOK	0.028	1.8	0.030	0.512	15.	253.
NO NAME (C1)	0.011	0.5	0.029	0.898	18.	622.
NO NAME (D1)	0.1	10.9	0.023	0.551	8.	190.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW HAMPSHIRE

NAME - GLEN LAKE (EUTROPHIC)
COUNTY - HILLSBOROUGH
STORET NO. - 3306 WORKING PAPER NO. 72. NTIS ACCESSION NO. PB-239 700/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	523.18	0.61	3.4	8.3	3.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	75.	1.7	0.028	0.015	0.135	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/ 2/72) P	(8/ 5/72) P	(10/ 4/72) P
3.8	0.6			

SUMMARY OF PHYTOPLANKTON DATA

6/ 2/72 GENERA	COUNT	8/ 5/72 GENERA	COUNT	10/ 4/72 GENERA	COUNT
FRAGILARIA	211	FRAGILARIA	17658	FLAGELLATES	1491
DINOBRYON	132	DINOBRYON	6577	MELOSIRA	843
SYNEDRA	128	OOCYSTIS	2973	MICRACTINIUM	271
NAVICULA	94	SYNEDRA	450	DINOBRYON	256
NITZSCHIA	38	GLOEOCAPSA	270	TABELLARIA	226
OTHER	199	OTHER	360	OTHER	1250
TOTAL	802	TOTAL	28288	TOTAL	4337

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	4032.	**********	36.	3955.	8023.
NITROGEN	11646.	**********	1333.	147714.	160694.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	5469.	32.	13.13
NITROGEN	115370.	28.	263.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
PISCATAQUOG RIVER	8.1	510.2	0.015	0.568	7.	283.
UNNAMED STREAM (B1)	0.023	1.6	0.035	0.725	15.	333.
UNNAMED STREAM (C1)	0.006	0.3	0.013	0.306	18.	210.
UNNAMED STREAM (D1)	0.008	0.5	0.023	0.373	9.	193.
UNNAMED STREAM (E1)	0.011	0.5	0.021	0.493	18.	341.
DAN LITTLE BROOK	0.054	3.9	0.013	0.405	6.	176.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - BLACK LAKE (EUTROPHIC)
COUNTY - ST LAWRENCE
STORET NO. - 3602 WORKING PAPER NO. 148. NTIS ACCESSION NO. PB-240 316/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	1445.22	33.80	******	27.0	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
56.	128.	1.9	0.030	0.017	0.080	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(5/20/72) N	(7/25/72) P	(10/10/72) N
13.1	2.2			

SUMMARY OF PHYTOPLANKTON DATA

5/20/72 GENERA	COUNT	7/25/72 GENERA	COUNT	10/10/72 GENERA	COUNT
DINOBRYON	2911	DINOBRYON	1555	DINOBRYON	572
CRYPTOMONAS	416	MELOSIRA	1266	FLAGELLATES	338
FRAGILARIA	344	FRAGILARIA	1067	STEPHANODISCUS	187
CYCLOTELLA	289	CRYPTOMONAS	361	MELOSIRA	56
SYNEDRA	253	CYCLOTELLA	307	OSCILLATORIA	48
OTHER	669	OTHER	778	OTHER	236
TOTAL	4882	TOTAL	5334	TOTAL	1447

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	54200.	54200.
NITROGEN	**********	**********	**********	962689.	962689.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	41596.	23.	1.60
NITROGEN	928122.	4.	28.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
INDIAN RIVER	18.5	992.0	0.040	0.990	35.	846.
BLACK CREEK	2.7	146.6	0.060	0.906	35.	534.
FISH CREEK	3.1	163.9	0.101	1.531	60.	907.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - CANADIAGUA (OLIGOTROPHIC)
COUNTY - ONTARIO, YATES
STORET NO. - 3604 WORKING PAPER NO. 149, NTIS ACCESSION NO. PB-240 304/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	476.56	42.99	39.0	3.6	15.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
111.	310.	4.5	0.009	0.005	0.380	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
4.3	0.1	(5/27/72) P	(7/21/72) P	(10/14/72) P

SUMMARY OF PHYTOPLANKTON DATA

5/27/72		7/21/72		10/14/72	
GENERA	COUNT	GENERA	COUNT	GENERA	COUNT
CHROOCOCCUS	1663	SYNEDRA	844	SCENEDESMUS	1457
FRAGILARIA	499	DINOBRYON	542	DINOBRYON	1080
DINOBRYON	289	FRAGILARIA	286	FLAGELLATES	729
SYNEDRA	181	NAVICULA	75	PEDIASTRUM	477
ANABAENA	51	CYCLOTELLA	45	MELOSIRA	226
OTHER	151	OTHER	160	OTHER	1182
TOTAL	2834	TOTAL	1952	TOTAL	5151

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2481.	**********	299.	3261.	6041.
NITROGEN	9669.	**********	4485.	144671.	158825.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2100.	65.	0.14
NITROGEN	79166.	50.	3.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WEST RIVER	0.5	75.9	0.092	1.907	6.	309.
SENECA PT GULLY	0.074	11.4	0.029	0.818	3.	165.
UNNAMED STREAM (C1)	0.076	12.2	0.064	1.392	12.	267.
BARNES GULLY	0.020	3.4	0.022	0.890	3.	159.
MENTETH GULLY	0.1	15.5	0.017	0.896	2.	178.
NAPLES CREEK	1.4	123.5	0.030	0.941	6.	211.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - CANNONSVILLE RESERVOIR (EUTROPHIC)
COUNTY - DELAWARE
STORET NO. - 3605 WORKING PAPER NO. 150. NTIS ACCESSION NO. PB-240 501/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1175.86	19.43	19.2	20.6	210.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	65.	1.8	0.046	0.022	0.610	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
29.9	**********	(5/21/72) P

SUMMARY OF PHYTOPLANKTON DATA
5/21/72

GENERA	COUNT
DINOBRYON	3526
CYCLOTELLA	1465
CHLAMYDOMONAS	380
ASTERIONELLA	199
CRYPTOMONAS	163
OTHER	108
TOTAL	5841

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	82780.	82780.
NITROGEN	**********	**********	**********	851211.	851211.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	24218.	71.	4.26
NITROGEN	650989.	24.	43.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WEST BR. DELAWARE RIVER	16.1	909.1	0.160	1.435	88.	797.
DRY BROOK	0.2	11.4	0.016	0.492	8.	246.
SHERRUCK BROOK	0.2	14.2	0.025	0.562	13.	281.
LOOMIS BROOK	0.5	32.1	0.021	0.899	9.	466.
TROUT CREEK	1.0	58.5	0.018	1.216	10.	523.
MAXWELL BROOK	0.057	3.4	0.014	0.803	8.	449.
DRYDEN BROOK	0.5	25.9	0.017	0.822	8.	433.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - CARRY FALLS RESERVOIR (MESOTROPHIC)
COUNTY - ST. LAWRENCE
STORET NO. - 3606 WORKING PAPER NO. 151. NTIS ACCESSION NO. PB-240 500/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	2261.07	26.14	5.4	42.9	38.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	50.	2.3	0.010	0.006	0.300	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(5/20/72) P	(7/25/72) P	(10/10/72) P
3.1	0.2			

SUMMARY OF PHYTOPLANKTON DATA

5/20/72 GENERA	COUNT	7/25/72 GENERA	COUNT	10/10/72 GENERA	COUNT
DINOBRYON	994	DINOBRYON	709	DINOBRYON	816
ANABAENA	551	SCHROEDERIA	173	FLAGELLATES	766
CYCLOTELLA	208	PEDIASTRUM	152	MELOSIRA	477
SYNEDRA	163	CRYPTOMONAS	152	SCHROEDERIA	188
CHROOCOCCUS	145	CYCLOTELLA	108	CHROOCOCCUS	176
OTHER	317	OTHER	152	OTHER	640
TOTAL	2378	TOTAL	1446	TOTAL	3063

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	5.	18635.	18639.
NITROGEN	**********	**********	159.	1192525.	1192683.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	13456.	28.	0.71
NITROGEN	1376843.	LOSS	45.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
RAQUETTE RIVER	38.5	2028.0	0.013	1.015	8.	503.
UNNAMED BROOK (B1)	0.093	4.9	0.018	1.171	11.	694.
UNNAMED BROOK (C1)	0.071	3.6	0.027	1.135	13.	704.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - CASSADAGA LAKE (EUTROPHIC)
COUNTY - CHAUTAUQUA
STORET NO. - 3607 WORKING PAPER NO. 152. NTIS ACCESSION NO. PB-240 449/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (MONTHS)
NATURAL	15.54	0.85	******	0.3	6.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
82.	200.	2.6	0.026	0.011	0.420	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
9.7	4.4	(5/26/72) P	(7/27/72) P	(10/13/72) P

SUMMARY OF PHYTOPLANKTON DATA

5/26/72 GENERA	COUNT	7/27/72 GENERA	COUNT	10/13/72 GENERA	COUNT
DINOBRYON	376	CHROOCOCCUS	7717	CYCLOTELLA	2214
CYCLOTELLA	221	ANABAENA	1123	FRAGILARIA	482
CRYPTOMONAS	156	CRYPTOMONAS	1087	FLAGELLATES	482
SCHROEDERIA	148	CRYPTOMONAS	507	ANABAENA	181
ACHNANTHES	18	DINOBRYON	109	ACHNANTHES	151
OTHER	50	OTHER	327	OTHER	737
TOTAL	969	TOTAL	10870	TOTAL	4247

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	454.	**********	5.	222.	680.
NITROGEN	1361.	**********	127.	11882.	13370.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	254.	63.	0.80
NITROGEN	10875.	19.	15.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED CREEK (B1)	0.017	0.8	0.029	0.856	18.	543.
UNNAMED CREEK (C1)	0.023	1.3	0.010	0.799	7.	445.
UNNAMED CREEK (D1)	0.1	7.5	0.028	1.596	16.	894.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - CAYUGA LAKE (MESOTROPHIC)
COUNTY - CAYUGA,SENECA, TOMPKINS
STORET NO. - 3608 WORKING PAPER NO. 153. NTIS ACCESSION NO. PB-240 348/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	2033.15	171.98	54.6	26.4	11.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
105.	500.	2.8	0.014	0.008	0.780	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
3.2	0.1	(5/16/72) P	(7/23/72) P	(10/13/72) P

SUMMARY OF PHYTOPLANKTON DATA

5/16/72 GENERA	COUNT	7/23/72 GENERA	COUNT	10/13/72 GENERA	COUNT
OOCYSTIS	2767	DINOBRYON	1320	FLAGELLATES	627
CYCLOTELLA	669	FRAGILARIA	562	DINOBRYON	187
CHROOCOCCUS	633	CYCLOTELLA	488	ANABAENA	151
DINOBRYON	615	CRYPTOMONAS	325	CRYPTOMONAS	145
SYNEDRA	398	MELOSIRA	289	CYCLOTELLA	78
OTHER	686	OTHER	1105	OTHER	446
TOTAL	5768	TOTAL	4069	TOTAL	1634

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	37075.	**********	336.	46676.	84086.
NITROGEN	175179.	**********	12721.	1186815.	1374715.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	40394.	52.	0.49
NITROGEN	1069310.	22.	8.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CAYUGA INLET	2.7	245.3	0.088	1.600	22.	331.
SIXMILE CREEK	1.4	128.5	0.070	0.849	15.	287.
CASCADILLA CREEK	0.5	35.5	0.143	1.281	62.	558.
FALL CREEK	5.1	331.5	0.099	1.501	41.	754.
PLEASANT GROVE BROOK	0.028	1.8	0.289	1.938	105.	991.
TAUGHANNOCK CREEK	2.3	173.5	0.042	1.280	17.	520.
TRUMANSBURG CREEK	0.4	35.0	0.399	2.331	92.	694.
UNNAMED STREAM (J-1)	0.023	4.9	2.007	11.428	6.	296.
BIG HOLLOW CREEK	0.028	6.0	0.027	2.579	4.	394.
UNNAMED STREAM (P-1)	0.076	6.5	0.059	1.933	22.	710.
GREAT GULLEY CREEK	0.5	38.8	0.031	1.943	11.	695.
PAINES CREEK	0.2	39.9	0.414	4.046	63.	620.
SALMON CREEK	3.1	231.0	0.051	1.883	21.	786.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - CHAUTAUQUA (EUTROPHIC)
COUNTY - CHAUTAUQUA
STORET NO. - 3610 WORKING PAPER NO. 155. NTIS ACCESSION NO. PB-240 296/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	489.51	57.20	6.9	9.2	1.4

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
49.	150.	2.0	0.028	0.013	0.090	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
13.3	5.4	(5/25/72) N	(7/27/72) N	(10/12/72) N

SUMMARY OF PHYTOPLANKTON DATA

5/25/72 GENERA	COUNT	7/27/72 GENERA	COUNT	10/12/72 GENERA	COUNT
DINOBRYON	753	DICTYOSPHAERIUM	2500	FLAGELLATES	512
FLAGELLATES	205	SCHROEDERIA	964	GOMPHOSPHAERIA	502
CYCLOTELLA	193	FRAGILARIA	892	DINOBRYON	261
FRAGILARIA	96	CYCLOTELLA	363	MELOSIRA	191
MELOSIRA	60	CRYPTOMONAS	211	ANABAENA	161
OTHER	266	OTHER	964	OTHER	662
TOTAL	1573	TOTAL	5398	TOTAL	2289

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	8213.	**********	204.	7156.	15574.
NITROGEN	35029.	**********	7642.	263551.	306222.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	18150.	LOSS	0.27
NITROGEN	344422.	LOSS	5.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WING CREEK	1.1	60.3	0.034	0.853	19.	495.
BALL CREEK	0.2	23.6	0.027	0.816	4.	226.
GOOSE CREEK	1.5	81.8	0.031	0.807	17.	460.
UNNAMED CREEK (F1)	0.034	3.9	0.044	1.340	25.	353.
DUTCH HOLLOW CREEK	0.3	16.3	0.031	0.878	17.	501.
HEMUS CREEK	0.6	31.6	0.011	0.706	6.	389.
DEWITTVILLE CREEK	0.6	32.6	0.023	1.180	8.	658.
BIG INLET	0.5	27.7	0.032	1.006	17.	555.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - CROSS LAKE (EUTROPHIC)
COUNTY - CAYUGA-ONONDAGA
STORET NO. - 3611 WORKING PAPER NO. 157. NTIS ACCESSION NO. PB-240 401/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	8031.59	8.81	5.5	85.4	7.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
129.	650.	1.3	0.076	0.042	0.485	*****

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
19.5	3.2	(5/28/72) N	(7/24/72) P	(10/13/72) N

SUMMARY OF PHYTOPLANKTON DATA

5/28/72 GENERA	COUNT	7/24/72 GENERA	COUNT	10/13/72 GENERA	COUNT
ASTERIONELLA	1483	DINOBRYON	904	STEPHANODISCUS	1386
CYCLOTELLA	1483	FLAGELLATES	796	DINOBRYON	602
ANACYSTIS(MICROCYSTIS)	434	PEDIASTRUM	687	CYCLOTELLA	316
MELOSIRA	289	CRYPTOMONAS	633	CRYPTOMONAS	301
SCENEDESMUS	289	SCENEDESMUS	524	FLAGELLATES	225
OTHER	1013	OTHER	1736	OTHER	1055
TOTAL	4991	TOTAL	5280	TOTAL	3886

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	59048.	**********	45.	236127.	295220.
NITROGEN	304005.	**********	1633.	4123799.	4429436.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	228376.	23.	33.52
NITROGEN	3967274.	10.	503.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SENECA RIVER	63.6	7907.3	0.109	1.636	30.	513.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - GOODYEAR LAKE (EUTROPHIC)
COUNTY - OTSEGO
STORET NO. - 3613 WORKING PAPER NO. 158. NTIS ACCESSION NO. PB-240 337/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	906.50	1.48	******	15.6	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
96.	230.	1.4	0.026	0.009	0.240	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(5/21/72) P	(7/28/72) P	(10/11/72) P
9.6	0.3			

SUMMARY OF PHYTOPLANKTON DATA

5/21/72 GENERA	COUNT	7/28/72 GENERA	COUNT	10/11/72 GENERA	COUNT
SYNEDRA	593	TABELLARIA	3637	FRAGILARIA	1148
DINOBRYON	586	CYCLOTELLA	318	DINOBRYON	841
FRAGILARIA	239	DINOBRYON	267	CRYPTOMONAS	497
CRYPTOMONAS	231	CHROOCOCCUS	137	CYCLOTELLA	344
MELOSIRA	94	OOCYSTIS	130	MELOSIRA	217
OTHER	556	OTHER	189	OTHER	841
TOTAL	2299	TOTAL	4678	TOTAL	3888

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3673.	**********	50.	18381.	22104.
NITROGEN	13379.	**********	1927.	504295.	519601.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	16127.	27.	14.96
NITROGEN	563120.	LOSS	351.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SUSQUEHANNA RIVER	14.6	846.9	0.048	1.068	21.	557.
UNNAMED BROOK (B1)	0.5	29.3	0.025	1.191	11.	570.
UNNAMED CREEK (C1)	0.1	6.6	0.026	0.982	13.	485.
UNNAMED CREEK (D1)	0.2	10.2	0.018	0.960	10.	502.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - LAKE HUNTINGTON (EUTROPHIC)
COUNTY - SULLIVAN
STORET NO. - 3615 WORKING PAPER NO. 159. NTIS ACCESSION NO. PB-240 338/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	1.81	0.34	******	0.0	0.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
14.	80.	3.5	0.015	0.010	0.260	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
6.4	2.1	(5/21/72) P	(7/ 7/72) P	(10/11/72) P

SUMMARY OF PHYTOPLANKTON DATA

5/21/72 GENERA	COUNT	7/ 7/72 GENERA	COUNT	10/11/72 GENERA	COUNT
DINOBRYON	2224	ANABAENA	246	ANABAENA	447
GLOEOCAPSA	524	GLOEOCAPSA	211	FRAGILARIA	306
SCENEDESMUS	416	FRAGILARIA	116	LYNGBYA	181
ANKISTRODESMUS	289	DINOBRYON	100	GLOEOCAPSA	80
CYCLOTELLA	289	NAVICULA	85	CHROOCOCCUS	70
OTHER	327	OTHER	528	OTHER	382
TOTAL	4069	TOTAL	1286	TOTAL	1466

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	5.	32.	36.
NITROGEN	**********	**********	236.	1179.	1415.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	18.	50.	0.11
NITROGEN	685.	52.	4.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED STREAM (A1)	0.008	0.5	0.038	1.178	18.	553.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - KEUKA LAKE (OLIGOTROPHIC)
COUNTY - YATES, STEUBEN
STORET NO. - 3617 WORKING PAPER NO. 160. NTIS ACCESSION NO. PB-240 352/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	471.38	47.43	22.6	4.3	7.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
74.	241.	3.6	0.008	0.005	0.305	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(5/27/72) P	(7/21/72) P	(10/14/72) P
5.7	**********			

SUMMARY OF PHYTOPLANKTON DATA

5/27/72 GENERA	COUNT	7/21/72 GENERA	COUNT	10/14/72 GENERA	COUNT
DINOBRYON	550	DINOBRYON	2296	CHROOCOCCUS	3321
FRAGILARIA	521	ASTERIONELLA	1212	FLAGELLATES	906
ASTERIONELLA	282	FRAGILARIA	832	KIRCHNERIELLA	679
MERISMOPEDIA	181	SCHROEDERIA	778	OSCILLATORIA	679
RHIZOSOLENIA	166	CYCLOTELLA	271	ANACYSTIS(MICROCYSTIS)	679
OTHER	341	OTHER	452	OTHER	2642
TOTAL	2041	TOTAL	5841	TOTAL	8906

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	744.	4195.	4939.
NITROGEN	**********	**********	27991.	179533.	207524.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2345.	53.	0.10
NITROGEN	104576.	50.	4.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
KEUKA INLET	0.4	64.7	0.057	1.241	11.	247.
UNNAMED CREEK (B-1)	0.031	3.9	0.045	1.108	11.	271.
UNNAMED CREEK (C-1)	0.051	6.2	0.017	1.551	4.	389.
SUGAR CREEK	0.8	93.8	0.033	1.058	8.	260.
UNNAMED CREEK (F-1)	0.068	8.3	0.027	1.939	7.	469.
HANETA LAKE OUTLET	0.023	2.6	0.036	0.998	9.	247.
UNNAMED CREEK (H-1)	0.037	4.4	0.034	2.044	8.	521.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - LONG LAKE (MESOTROPHIC)
COUNTY - HAMILTON
STORET NO. - 3619 WORKING PAPER NO. 161. NTIS ACCESSION NO. PB-240 351/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	1219.89	16.55	******	26.6	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	50.	2.9	0.008	0.005	0.220	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
3.5	**********	(5/20/72) P	(7/25/72) P	(10/ 6/72) P

SUMMARY OF PHYTOPLANKTON DATA

5/20/72 GENERA	COUNT	7/25/72 GENERA	COUNT	10/ 6/72 GENERA	COUNT
DINOBRYON	211	CHROOCOCCUS	265	FLAGELLATES	362
PERIDINIUM	175	MERISMOPEDIA	127	CHROOCOCCUS	309
TABELLARIA	93	RAPHIDIOPSIS	66	CYCLOTELLA	166
FLAGELLATES	51	FLAGELLATES	63	ANABAENA	90
ANABAENA	45	SCENEDESMUS	45	MELOSIRA	75
OTHER	34	OTHER	85	OTHER	611
TOTAL	609	TOTAL	651	TOTAL	1613

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	91.	7347.	7438.
NITROGEN	**********	**********	3370.	667601.	670970.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	8889.	LOSS	0.45
NITROGEN	644943.	4.	40.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
RAQUETTE RIVER	10.8	494.7	0.010	0.878	7.	600.
SOUTH POND OUTLET	1.2	55.2	0.005	0.961	3.	655.
SHAW BROOK	0.3	14.2	0.019	1.036	13.	710.
UNNAMED BROOK (01)	0.040	1.8	0.013	1.146	8.	783.
[illegible]G BROOK	2.3	103.6	0.010	1.005	7.	687.
[illegible]INE BROOK	0.3	12.3	0.007	0.523	7.	707.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - OTTER LAKE (EUTROPHIC)
COUNTY - CAYUGA
STORET NO. - 3625 WORKING PAPER NO. 164. NTIS ACCESSION NO. PB-240 347/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	7.51	1.14	******	0.1	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
122.	270.	1.1	0.043	0.011	0.240	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
13.3	1.1	(5/17/72) P	(7/24/72) P	(10/13/72) P

SUMMARY OF PHYTOPLANKTON DATA

5/17/72 GENERA	COUNT	7/24/72 GENERA	COUNT	10/13/72 GENERA	COUNT
FRAGILARIA	904	LYNGBYA	14130	LYNGBYA	16616
DINOBRYON	754	ANACYSTIS(MICROCYSTIS)	6812	SYNEDRA	2632
LYNGBYA	497	FRAGILARIA	3333	CHROOCOCCUS	2481
CYCLOTELLA	482	CHROOCOCCUS	978	FLAGELLATES	1278
FLAGELLATES	113	MELOSIRA	580	OSCILLATORIA	1278
OTHER	468	OTHER	1377	OTHER	2783
TOTAL	3218	TOTAL	27210	TOTAL	27068

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	77.	77.
NITROGEN	**********	**********	**********	7410.	7410.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	177.	LOSS	0.07
NITROGEN	6399.	14.	6.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED CREEK (B-1)	0.014	1.0	0.023	2.302	9.	954.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - OWASCO
COUNTY - CAYUGA
STORET NO. - 3627

(MESOTROPHIC)

WORKING PAPER NO. 163. NTIS ACCESSION NO. PB-240 353/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	26.68	29.3	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
107.	280.	2.7	0.009	0.005	0.940	••••••

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
8.5	0.2	(5/28/72) P	(7/24/72) P	(10/12/72) P

SUMMARY OF PHYTOPLANKTON DATA

5/28/72 GENERA	COUNT	7/24/72 GENERA	COUNT	10/12/72 GENERA	COUNT
DINOBRYON	585	FRAGILARIA	548	FRAGILARIA	743
RAPHIDIOPSIS	386	DINOBRYON	530	MELOSIRA	502
ANACYSTIS(MICROCYSTIS)	253	FLAGELLATES	277	DINOBRYON	402
CYCLOTELLA	120	RAPHIDIOPSIS	60	FLAGELLATES	231
NAVICULA	42	SYNEDRA	48	ANACYSTIS(MICROCYSTIS)	110
OTHER	145	OTHER	164	OTHER	663
TOTAL	1531	TOTAL	1627	TOTAL	2651

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - ROUND LAKE (EUTROPHIC)
COUNTY - SARATOGA
STORET NO. - 3630

WORKING PAPER NO. 166. NTIS ACCESSION NO. PB-240 344/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	69.93	1.30	******	1.1	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
76.	260.	1.2	0.076	0.025	0.310	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
28.3	**********	(5/28/72) N	(7/25/72) N	(10/10/72) P

SUMMARY OF PHYTOPLANKTON DATA

5/28/72 GENERA	COUNT	7/25/72 GENERA	COUNT	10/10/72 GENERA	COUNT
ASTERIONELLA	1396	MERISMOPEDIA	1266	FLAGELLATES	1358
SYNEDRA	1396	ANABAENA	497	CYCLOTELLA	943
TABELLARIA	472	ANACYSTIS(MICROCYSTIS)	309	DINOBRYON	830
CRYPTOMONAS	472	FRAGILARIA	226	FRAGILARIA	717
STEPHANODISCUS	208	CHROOCOCCUS	166	DICTYOSPHAERIUM	642
CYCLOTELLA	170				
OTHER	509	OTHER	445	OTHER	3359
TOTAL	4623	TOTAL	2909	TOTAL	7849

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1007.	**********	**********	5751.	6757.
NITROGEN	3016.	**********	**********	44435.	47451.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	5560.	18.	5.22
NITROGEN	82390.	LOSS	36.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED CREEK (A-1)	0.1	7.5	0.061	0.963	21.	487.
UNNAMED CREEK (B-1)	0.037	2.3	0.047	1.111	47.	537.
BALLSTON CREEK	0.7	46.1	0.050	0.912	25.	457.
UNNAMED CREEK (D-1)	0.025	1.6	0.322	1.738	155.	849.
UNNAMED CREEK (E-1)	0.091	5.7	1.275	4.361	638.	2176.

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN NEW YORK

NAME - SACANDAGA RESERVOIR (MESOTROPHIC)
COUNTY - FULTON, SARATOGA
STORET NO. - 3632 WORKING PAPER NO. 167, NTIS ACCESSION NO. PB-240 339/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	2703.96	122.00	7.6	64.7	166.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	50.	3.5	0.009	0.006	0.270	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(5/18/72) P	(7/31/72) P	(10/10/72) P
4.8	**********			

SUMMARY OF PHYTOPLANKTON DATA

5/18/72 GENERA	COUNT	7/31/72 GENERA	COUNT	10/10/72 GENERA	COUNT
DINOBRYON	1212	LYNGBYA	2711	STICHOCOCCUS	2211
FLAGELLATES	624	FRAGILARIA	1265	DINOBRYON	829
PHACUS	325	DINOBRYON	1175	FLAGELLATES	502
CRYPTOMONAS	27	ANACYSTIS(MICHOCYSTIS)	994	FRAGILARIA	402
SYNEDRA	18	PERIDINIUM	120	ANABAENA	327
OTHER	100	OTHER	241	OTHER	1809
TOTAL	2306	TOTAL	6506	TOTAL	6080

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	567.	**********	150.	21156.	21873.
NITROGEN	1701.	**********	5605.	1682890.	1690196.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	16077.	26.	0.18
NITROGEN	1741714.	LOSS	13.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SACANDAGA RIVER	32.6	1359.7	0.008	1.035	6.	606.
UNNAMED CREEK (A1)	0.3	10.6	0.014	0.522	7.	389.
HUNTERS CREEK	0.4	17.1	0.015	0.517	11.	385.
BATCHELLER CREEK	0.4	17.6	0.011	0.830	8.	622.
BEECHER CREEK	0.7	29.8	0.009	0.877	7.	653.
WEST STONY CREEK	5.5	227.9	0.010	0.789	7.	585.
EAST STONY CREEK	5.9	247.1	0.012	0.719	9.	535.
SAND CREEK	1.0	41.7	0.011	0.814	6.	607.
PAUL CREEK	1.3	53.1	0.009	0.975	7.	726.
DALY CREEK	1.7	70.4	0.009	0.688	6.	512.
KENNYETTO CREEK	2.3	95.3	0.038	1.058	27.	786.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - SARATOGA LAKE (EUTROPHIC)
COUNTY - SARATOGA
STORET NO. - 3633 WORKING PAPER NO. 168. NTIS ACCESSION NO. PB-240 336/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	631.96	16.32	7.9	10.0	150.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
72.	232.	2.5	0.025	0.016	0.145	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
11.8	7.5	(5/15/72) P	(7/25/72) P	(10/11/72) N

SUMMARY OF PHYTOPLANKTON DATA

5/ 9/72		5/15/72		7/25/72		10/11/72	
GENERA	COUNT	GENERA	COUNT	GENERA	COUNT	GENERA	COUNT
DINOBRYON	741	ANABAENA	2206	DINOBRYON	651	FRAGILARIA	422
FLAGELLATES	488	FRAGILARIA	759	FLAGELLATES	542	ANABAENA	339
NAVICULA	262	CRYPTOMONAS	579	TABELLARIA	410	CYCLOTELLA	279
MELOSIRA	172	DINOBRYON	344	CRYPTOMONAS	301	FLAGELLATES	256
NITZSCHIA	163	FLAGELLATES	325	SCHROEDERIA	217	NAVICULA	75
OTHER	425	OTHER	868	OTHER	385	OTHER	400
TOTAL	2251	TOTAL	5081	TOTAL	2506	TOTAL	1771

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	13206.	**********	86.	12794.	26086.
NITROGEN	69075.	**********	3166.	286190.	358431.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	12168.	53.	1.60
NITROGEN	276367.	23.	22.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
KAYADEROSSERAS CREEK	8.0	507.6	0.076	0.911	23.	410.
UNNAMED CREEK (a-1)	0.6	53.4	0.217	2.080	7.	1042.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - SCHROON (OLIGOTROPHIC)
COUNTY - ESSEX+WARREN
STORET NO. - 3634 WORKING PAPER NO. 169. NTIS ACCESSION NO. PB-240 340/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	1118.88	16.71	14.3	18.1	153.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	59.	3.7	0.004	0.003	0.160	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/ 1/72)	(7/25/72)	(10/10/72)
2.1	0.1	P	P	P

SUMMARY OF PHYTOPLANKTON DATA

6/ 1/72 GENERA	COUNT	7/25/72 GENERA	COUNT	10/10/72 GENERA	COUNT
DINOBRYON	219	ANACYSTIS(MICROCYSTIS)	76	DINOBRYON	163
CYCLOTELLA	132	CHROOCOCCUS	60	FLAGELLATES	139
FRAGILARIA	70	FLAGELLATES	45	APHANOCAPSA	127
ACHNANTHES	27	DINOBRYON	34	FRAGILARIA	87
MALLOMONAS	14	MERISMOPEDIA	31	TABELLARIA	78
OTHER	55	OTHER	157	OTHER	223
TOTAL	517	TOTAL	403	TOTAL	817

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	195.	6345.	6540.
NITROGEN	**********	**********	7324.	607156.	614481.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	14644.	LOSS	0.39
NITROGEN	732626.	LOSS	36.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SCHROON RIVER	7.3	448.1	0.010	1.114	5.	563.
ROGERS BROOK	0.4	22.5	0.019	0.890	8.	572.
HORSESHOE POND BROOK	0.1	6.5	0.012	0.864	6.	427.
UNNAMED BROOK (F1)	0.1	6.5	0.010	0.832	5.	415.
MILL BROOK	1.0	64.0	0.013	1.293	6.	648.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - SENECA LAKE (MESOTHROPHIC)
COUNTY - SCHUYLER
STORET NO. - 3635 WORKING PAPER NO. 170. NTIS ACCESSION NO. PB-240 341/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	1823.36	175.35	88.7	14.6	33.7

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
93.	790.	4.8	0.010	0.006	0.380	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
6.1	0.1	(5/16/72) P	(7/23/72) P	(10/14/72) P

SUMMARY OF PHYTOPLANKTON DATA

5/16/72 GENERA	COUNT	7/23/72 GENERA	COUNT	10/14/72 GENERA	COUNT
DINOBRYON	931	CYCLOTELLA	141	DINOBRYON	532
OOCYSTIS	705	CRYPTOMONAS	120	FRAGILARIA	482
ASTERIONELLA	362	OOCYSTIS	80	FLAGELLATES	412
CRYPTOMONAS	136	DINOBRYON	80	CRYPTOMONAS	211
PERIDINIUM	126	ANACYSTIS(MICROCYSTIS)	74	ANABAENA	211
OTHER	281	OTHER	152	OTHER	642
TOTAL	2541	TOTAL	647	TOTAL	2490

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	45442.	**********	3034.	18526.	67002.
NITROGEN	179370.	**********	10077.	821397.	1010843.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	13424.	80.	0.38
NITROGEN	520168.	49.	5.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
JOHNS CREEK	0.2	12.9	0.040	1.498	19.	696.
DIVERSION CHANNEL	0.9	81.3	0.028	1.355	2.	465.
CATHERINE CREEK	0.6	50.0	0.047	1.258	16.	439.
SHEQUAGA CREEK	0.6	40.1	0.021	1.106	10.	507.
GLEN CREEK	0.9	59.1	0.028	0.806	13.	375.
BIG STREAM	1.2	79.0	0.137	1.704	45.	729.
SAWMILL CREEK	0.057	13.5	0.010	1.582	1.	205.
PLUMB POINT CREEK	0.2	14.5	0.017	1.575	8.	774.
KEUKA LAKE OUTLET	4.4	538.7	0.071	1.337	8.	305.
KASHONG CREEK	0.2	79.5	0.033	3.452	3.	313.
INDIAN CREEK	0.1	24.6	0.025	1.007	4.	155.
HECTOR FALLS CREEK	0.5	33.2	0.021	0.837	9.	384.
MARSH CREEK	0.031	19.4	0.166	1.896	8.	94.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - SWAN LAKE (EUTROPHIC)
COUNTY - SULLIVAN
STORET NO. - 3636 WORKING PAPER NO. 171. NTIS ACCESSION NO. PB-241 783/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	38.85	1.34	******	0.8	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
16.	72.	1.7	0.042	0.014	0.125	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
9.5	3.8	(5/21/72) N	(7/22/72) N	(10/11/72) N

SUMMARY OF PHYTOPLANKTON DATA

5/21/72 GENERA	COUNT	7/22/72 GENERA	COUNT	10/11/72 GENERA	COUNT
DINOBRYON	1555	ANACYSTIS(MICROCYSTIS)	334	DINOBRYON	1160
FRAGILARIA	814	RAPHIDIOPSIS	262	CHROOCOCCUS	813
FLAGELLATES	723	SCHROEDERIA	208	FRAGILARIA	678
CHROOCOCCUS	470	PERIDINIUM	190	FLAGELLATES	527
MELOSIRA	380	FRAGILARIA	181	MELOSIRA	407
OTHER	1230	OTHER	941	OTHER	1385
TOTAL	5172	TOTAL	2116	TOTAL	4970

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	363.	**********	5.	1025.	1392.
NITROGEN	1088.	**********	109.	28617.	29814.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	907.	35.	1.04
NITROGEN	22698.	24.	22.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED CREEK (A1)	0.4	17.1	0.041	1.183	27.	783.
UNNAMED CREEK (B1)	0.020	0.8	0.025	0.669	18.	531.
UNNAMED CREEK (C1)	0.031	1.5	0.060	1.143	40.	765.
UNNAMED CREEK (D1)	0.068	3.2	0.102	2.011	67.	1351.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - SWINGING BRIDGE RES. (EUTROPHIC)
COUNTY - SULLIVAN
STORET NO. - 3637 WORKING PAPER NO. 172. NTIS ACCESSION NO. PB-240 399/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	382.54	3.47	13.4	5.9	92.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	75.	1.3	0.057	0.020	0.520	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(5/21/72) P	(7/22/72) N	(10/11/72) P AND N
28.7	**********			

SUMMARY OF PHYTOPLANKTON DATA

5/21/72		7/22/72		10/11/72	
GENERA	COUNT	GENERA	COUNT	GENERA	COUNT
FLAGELLATES	1555	ANABAENA	8795	ANABAENA	1340
CRYPTOMONAS	886	FRAGILARIA	643	MELOSIRA	392
FRAGILARIA	470	NITZSCHIA	452	CHROOCOCCUS	226
DINOBRYON	434	FLAGELLATES	271	FLAGELLATES	181
NAVICULA	289	SYNEDRA	151	FRAGILARIA	151
OTHER	1050	OTHER	361	OTHER	1023
TOTAL	4684	TOTAL	10873	TOTAL	3313

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	19710.	**********	27.	4803.	24540.
NITROGEN	68939.	**********	1066.	279605.	349610.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	10181.	59.	7.07
NITROGEN	278957.	20.	100.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
RINNE BROOK	0.5	34.7	0.065	1.530	31.	740.
WHITE LAKE BROOK	0.5	35.7	0.058	1.564	7.	361.
MONGAUP RIVER	3.9	198.1	0.124	2.087	12.	817.
BURNT MEADOW BROOK	0.1	7.3	0.018	1.301	9.	700.
SACKETT LAKE BROOK	0.2	10.1	0.112	1.421	13.	503.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - CONESUS LAKE (EUTROPHIC)
COUNTY - LIVINGSTON
STORET NO. - 3639 WORKING PAPER NO. 156. NTIS ACCESSION NO. PB-240 295/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	180.52	12.89	8.9	2.2	1.7

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
116.	340.	3.2	0.020	0.013	0.100	**********

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(5/27/72) N	(7/27/72) P	(10/13/72) N
9.9	**********			

SUMMARY OF PHYTOPLANKTON DATA

5/27/72 GENERA	COUNT	7/27/72 GENERA	COUNT	10/13/72 GENERA	COUNT
DINOBRYON	982	FRAGILARIA	588	ANABAENA	1642
FRAGILARIA	356	CYCLOTELLA	149	FLAGELLATES	407
SCHROEDERIA	36	DINOBRYON	140	MELOSIRA	346
CRYPTOMONAS	36	SCHROEDERIA	90	DINOBRYON	286
FLAGELLATES	30	CRYPTOMONAS	81	MELOSIRA	271
OTHER	37	OTHER	145	OTHER	482
TOTAL	1477	TOTAL	1193	TOTAL	3434

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	336.	4590.	4925.
NITROGEN	**********	**********	12630.	120789.	133419.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2109.	57.	0.38
NITROGEN	73741.	45.	10.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LONG POINT GULLEY	0.065	5.4	0.069	2.349	28.	934.
NORTH GULLEY CREEK	0.082	6.7	0.058	1.554	19.	591.
DENSMORE GULLEY	0.076	6.2	0.043	1.827	18.	746.
WILKINS CREEK	0.062	4.9	0.216	1.528	80.	580.
HANNAS CREEK	0.085	7.0	0.098	2.448	40.	975.
CONESUS INLET	0.9	74.3	0.079	1.605	28.	587.
DAVIS CREEK	0.2	20.2	0.022	1.153	9.	460.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN NEW YORK

NAME - LOWER ST. REGIS (EUTROPHIC)
COUNTY - FRANKLIN
STORET NO. - 3640 WORKING PAPER NO. 162. NTIS ACCESSION NO. PB-240 335/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	54.91	1.87	5.1	1.0	110.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
10.	50.	1.2	0.017	0.008	0.210	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
7.9	**********	(5/20/72) P	(7/25/72) P	(10/10/72) P

SUMMARY OF PHYTOPLANKTON DATA

5/20/72 GENERA	COUNT	7/25/72 GENERA	COUNT	10/10/72 GENERA	COUNT
DINOBRYON	1458	DINOBRYON	3906	FRAGILARIA	1205
FLAGELLATES	614	ANACYSTIS(MICROCYSTIS)	579	ANABAENA	964
MELOSIRA	193	CHROOCOCCUS	271	STEPHANODISCUS	858
ANACYSTIS(MICROCYSTIS)	144	MELOSIRA	253	MELOSIRA	843
CYCLOTELLA	144	CYCLOTELLA	217	FLAGELLATES	572
OTHER	387	OTHER	506	OTHER	1115
TOTAL	2940	TOTAL	6732	TOTAL	5557

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	95.	**********	9.	658.	762.
NITROGEN	3401.	**********	317.	30104.	33823.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	680.	11.	0.41
NITROGEN	26556.	21.	18.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
UNNAMED CREEK (C1)	0.1	7.8	0.019	0.906	11.	521.
OSGOOD POND OUTLET	0.037	2.1	0.050	1.196	24.	652.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN RHODE ISLAND

NAME - SLATERSVILLE RESERVOIR (EUTROPHIC)
COUNTY - PROVIDENCE
STORET NO. - 4402 WORKING PAPER NO. 28. NTIS ACCESSION NO. PB-239 548/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	232.32	0.84	2.4	4.4	5.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	91.	1.3	0.032	0.011	0.205	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/ 4/72) P	(8/ 1/72) P	(10/ 6/72) P
8.1	0.2			

SUMMARY OF PHYTOPLANKTON DATA

6/ 4/72 GENERA	COUNT	8/ 1/72 GENERA	COUNT	10/ 6/72 GENERA	COUNT
FLAGELLATES	391	CHROOCOCCUS	384	DICTYOSPHAERIUM	1175
ANABAENA	228	ANACYSTIS(MICROCYSTIS)	309	CRYPTOMONAS	665
CRYPTOMONAS	145	MERISMOPEDIA	286	FLAGELLATES	376
TABELLARIA	119	FRAGILARIA	241	SCENEDESMUS	301
RAPHIDIOPSIS	61	DINOBRYON	151	SYNEDRA	211
OTHER	188	OTHER	852	OTHER	1112
TOTAL	1132	TOTAL	2223	TOTAL	3840

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	757.	**********	18.	3923.	4698.
NITROGEN	1510.	**********	639.	88277.	90426.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3914.	17.	5.61
NITROGEN	88662.	2.	107.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BRANCH RIVER	3.6	190.9	0.038	0.669	19.	395.
TROUT BROOK	0.1	6.5	0.016	0.491	7.	242.
TARKILN BROOK	0.5	23.8	0.013	0.525	8.	315.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN RHODE ISLAND

NAME - TURNER RESERVOIR (EUTROPHIC)
COUNTY - PROVIDENCE
STORET NO. - 4403 WORKING PAPER NO. 29. NTIS ACCESSION NO. PB-239 547/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	138.56	0.49	1.5	2.6	3.3

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
27.	260.	0.8	0.850	0.635	2.300	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
22.9	38.1	(6/ 4/72) N	(8/ 1/72) N	(10/ 6/72) N

SUMMARY OF PHYTOPLANKTON DATA

8/ 1/72 GENERA	COUNT	10/ 6/72 GENERA	COUNT
DICTYOSPHAERIUM	1446	MELOSIRA	1940
CYCLOTELLA	1386	SYNEDRA	678
SYNEDRA	316	SCENEDESMUS	339
ANACYSTIS(MICROCYSTIS)	211	CHROOCOCCUS	245
FLAGELLATES	196	NAVICULA	188
OTHER	1445	OTHER	1130
TOTAL	5000	TOTAL	4520

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	30132.	45378.	**********	5011.	80512.
NITROGEN	88494.	37415.	**********	86199.	222109.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	53451.	34.	163.07
NITROGEN	214889.	3.	449.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
TEN MILE RIVER	2.2	115.0	0.854	2.934	36.	593.
COLES BROOK	0.2	8.0	0.119	1.374	36.	722.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN VERMONT

NAME - LAKE CHAMPLAIN (MESOTROPHIC)
COUNTY - VT. AND NY AREA
STORET NO. - 5001 WORKING PAPER NO. 154. NTIS ACCESSION NO. PB-240 321/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	21186.19	1130.30	19.4	313.0	2.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
46.	142.	2.3	0.018	0.010	0.190	0.125

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
11.1	1.3	(6/ 1/72) P	(8/ 2/72) P	(10/ 8/72) P

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL & INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	152,073	**********	419,587	571,660
NITROGEN	1,180,751	**********	11,938,704	13,119,455

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	296018.	.48	0.51
NITROGEN	9837656.	.25	11.61

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT* (KG/SQ KM/YR)	TOTAL N EXPORT* (KG/SQ KM/YR)
MISSISQUOI RIVER	45.9	2230.0	0.043	1.258	28.	824.
STEVENS BROOK	0.1	64.7	0.132	1.239	166.	553.
RAMOILLE RIVER	37.4	1851.8	0.039	0.852	18.	514.
MALLETTS CREEK	0.9	494.7	0.041	1.174	3.	57.
WINOOSKI RIVER	46.4	2750.6	0.059	1.093	35.	594.
LAPLATTE RIVER	2.0	119.4	0.128	0.915	68.	484.
OTTER CREEK	37.4	2258.5	0.078	1.250	38.	666.
BARGE CANAL-POULTNEY R	9.0	676.0	0.066	0.752	91.	1525.
TICONDEROGA CREEK	8.0	678.6	0.018	0.673	9.	209.
FIVEMILE CREEK	0.3	217.6	0.079	1.413	3.	56.
PUTMAN CREEK	2.2	1587.7	0.028	1.327	1.	47.
MCKENZIE BROOK	0.4	26.7	0.036	0.974	10.	377.
MILL BROOK	1.0	70.2	0.143	1.288	30.	516.
HUISINGTON BROOK	0.4	29.5	0.040	1.154	17.	445.
BOUQUET RIVER	10.5	720.0	0.038	0.707	20.	385.
AUSABLE	19.5	1341.6	0.023	1.122	11.	573.
LITTLE AUSABLE RIVER	2.7	186.0	0.066	1.136	29.	504.
SALMON RIVER	2.5	170.9	0.039	1.026	9.	467.
SARANAC	23.2	1590.3	0.041	0.974	37.	542.
LITTLE CHAZY RIVER	1.9	132.6	0.065	1.330	31.	648.
GREAT CHAZY RIVER	11.3	777.0	0.049	1.148	21.	451.

* Includes industrial and municipal point sources.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN VERMONT

NAME - CLYDE POND (EUTROPHIC)
COUNTY - ORLEANS
STORET NO. - 5002 WORKING PAPER NO. 15. NTIS ACCESSION NO. PB-234 540/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	362.60	0.57	3.4	6.0	3.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
54.	145.	1.7	0.021	0.006	0.175	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
7.5	0.2	(6/ 3/72) P	(7/ 3/72) P	(10/ 5/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/ 3/72 GENERA	COUNT	7/ 3/72 GENERA	COUNT	10/ 5/72 GENERA	COUNT
DINOBRYON	259	CHROOCOCCUS	1213	DINOBRYON	1190
MERISMOPEDIA	241	DINOBRYON	558	CYCLOTELLA	376
MELOSIRA	211	SCHROEDERIA	226	FRAGILARIA	346
STNEDRA	145	MICRACTINIUM	181	FLAGELLATES	331
CYCLOTELLA	134	GLOEOCAPSA	136	CRYPTOMONAS	286
OTHER	512	OTHER	421	OTHER	2215
TOTAL	1507	TOTAL	2735	TOTAL	4744

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	875.	**********	14.	3823.	4712.
NITROGEN	2484.	**********	853.	156998.	160834.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3995.	15.	8.32
NITROGEN	174549.	LOSS	283.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CLYDE RIVER	5.8	349.1	0.022	0.951	10.	428.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN VERMONT

NAME - HARRIMAN RESERVOIR (MESOTROPHIC)
COUNTY - WINDHAM
STORET NO. - 5005 WORKING PAPER NO. 20. NTIS ACCESSION NO. PB-239 545/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	486.40	8.84	10.4	13.6	78.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	50.	2.8	0.009	0.007	0.270	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
1.8	0.1	(5/30/72) P	(7/31/72) P	(10/ 4/72) P

SUMMARY OF PHYTOPLANKTON DATA

5/30/72 GENERA	COUNT	7/31/72 GENERA	COUNT	10/ 4/72 GENERA	COUNT
DINOBRYON	922	DINOBRYON	213	DINOBRYON	93
ANABAENA	63	MERISMOPEDIA	184	MERISMOPEDIA	88
STEPHANODISCUS	50	GLOEOCAPSA	98	CRYPTOMONAS	46
TABELLARIA	23	GOCYSTIS	22	STEPHANODISCUS	16
ANKISTRODESMUS	14	CRYPTOMONAS	18	CHROOCOCCUS	15
OTHER	31	OTHER	44	OTHER	37
TOTAL	1103	TOTAL	579	TOTAL	295

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	2041.	**********	259.	5492.	7791.
NITROGEN	5478.	**********	9905.	359433.	374816.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	6444.	17.	0.88
NITROGEN	311474.	17.	42.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
DEERFIELD RIVER	7.1	253.0	0.009	0.853	8.	753.
N BRANCH DEERFIELD RIVER	3.7	130.5	0.018	0.742	15.	712.
BINNEY BROOK	0.3	9.3	0.011	0.617	10.	550.
SADAWAGA LAKE OUTLET	0.2	7.3	0.030	0.929	26.	835.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN VERMONT

NAME - LAKE LAMOILLE (EUTROPHIC)
COUNTY - LAMOILLE
STORET NO. - 5007 WORKING PAPER NO. 16. NTIS ACCESSION NO. PB-239 541/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	694.12	0.62	1.7	12.4	1.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
46.	140.	1.5	0.018	0.010	0.260	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
3.5	1.9	(6/ 2/72) P	(8/ 2/72) P	(10/ 5/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/ 2/72 GENERA	COUNT	8/ 2/72 GENERA	COUNT	10/ 5/72 GENERA	COUNT
FRAGILARIA	940	DINOBRYON	1320	DINOBRYON	1262
SYNEDRA	886	ANABAENA	1085	ACHNANTHES	565
CYMBELLA	705	NAVICULA	597	CYMBELLA	471
DINOBRYON	579	CYMBELLA	452	FLAGELLATES	414
NAVICULA	217	ANACYSTIS(MICROCYSTIS)	325	FRAGILARIA	301
OTHER	470	OTHER	1429	OTHER	2015
TOTAL	3797	TOTAL	5208	TOTAL	5028

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	4553.	**********	**********	11052.	15605.
NITROGEN	14789.	**********	**********	304263.	319052.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	12422.	20.	25.20
NITROGEN	302526.	5.	515.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LAMOILLE RIVER	11.0	616.4	0.030	0.732	15.	405.
RYDER BROOK	0.9	48.4	0.030	1.182	17.	670.
UNNAMMED BROOK (41)	0.4	19.7	0.079	1.399	45.	796.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN VERMONT

NAME - LAKE MEMPHREMAGOG (EUTROPHIC - UNITED STATES PORTION ONLY)
COUNTY - ORLEANS
STORET NO. - 5008 WORKING PAPER NO. 19, NTIS ACCESSION NO. PB-239 544/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	1779.33	94.57	15.5	27.3	1.7

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
56.	160.	2.0	0.021	0.008	0.145	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
14.0	2.5	(6/ 3/72) P	(7/31/72) N	(10/ 5/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/ 3/72 GENERA	COUNT	7/31/72 GENERA	COUNT	10/ 5/72 GENERA	COUNT
DINOBRYON	1092	DINOBRYON	1036	ANABAENA	3057
FRAGILARIA	1005	FRAGILARIA	325	MELOSIRA	943
ANABAENA	268	CRYPTOMONAS	277	FLAGELLATES	906
ASTERIONELLA	202	ANACYSTIS(MICROCYSTIS)	169	SYNEDRA	717
MELOSIRA	159	RHIZOSOLENIA	157	CHROOCOCCUS	340
OTHER	124	OTHER	795	OTHER	1622
TOTAL	2842	TOTAL	2759	TOTAL	7585

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	19995.	**********	172.	27551.	47719.
NITROGEN	55800.	**********	6395.	992345.	1054539.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	27515.	42.	0.58
NITROGEN	UNKNOWN	UNKNOWN	11.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CLYDE RIVER	6.1	367.8	0.032	0.858	12.	475.
BARTON RIVER	6.7	450.7	0.067	0.100	20.	487.
BLACK RIVER	5.8	347.1	0.041	0.078	21.	565.
JOHNS RIVER	0.4	25.6	0.030	0.107	10.	578.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN VERMONT

NAME - ARROWHEAD MOUNTAIN LAKE (EUTROPHIC)
COUNTY - CHITTENDEN, FRANKLIN
STORET NO. - 5010 WORKING PAPER NO. 17, NTIS ACCESSION NO. PB-239 542/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1815.59	3.34	3.1	34.4	3.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
36.	108.	1.6	0.015	0.009	0.230	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
8.5	0.2	(6/ 2/72) P	(7/31/72) P	(10/ 5/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/20/72 GENERA	COUNT	7/31/72 GENERA	COUNT	10/ 5/72 GENERA	COUNT
SYNEDRA	1355	DINOBRYON	733	FRAGILARIA	964
CHROOCOCCUS	753	CRYPTOMONAS	131	FLAGELLATES	753
DINOBRYON	648	FLAGELLATES	95	MELOSIRA	467
FLAGELLATES	482	MERISMOPEDIA	80	DINOBRYON	392
RAPHIDIOPSIS	166	GLOEOCAPSA	50	CYCLOTELLA	211
OTHER	527	OTHER	267	OTHER	707
TOTAL	3931	TOTAL	1356	TOTAL	3494

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	7415.	3800.	5.	26408.	37628.
NITROGEN	24989.	5320.	172.	1063485.	1093965.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	27433.	27.	11.26
NITROGEN	1123737.	LOSS	327.3

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LAMOILLE RIVER	33.7	1776.7	0.029	0.980	14.	584.
UNNAMED STREAM (42)	0.4	22.0	0.031	1.029	19.	622.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN VERMONT

NAME - WATERBURY RESERVOIR (MESOTROPHIC)
COUNTY - WASHINGTON, LAMOILLE
STORET NO. - 5011 WORKING PAPER NO. 18, NTIS ACCESSION NO. PB-239 543/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	290.08	3.60	12.7	6.4	83.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
14.	70.	2.4	0.007	0.004	0.230	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/ 2/72) P	(8/ 2/72) P	(10/ 5/72) P
5.2	0.1			

SUMMARY OF PHYTOPLANKTON DATA

6/ 2/72 GENERA	COUNT	8/ 2/72 GENERA	COUNT	10/ 5/72 GENERA	COUNT
DINOBRYON	1947	DINOBRYON	1465	DINOBRYON	301
CRYPTOMONAS	289	ANACYSTIS(MICROCYSTIS)	940	FLAGELLATES	211
FLAGELLATES	78	GLOEOCAPSA	452	CRYPTOMONAS	191
NAVICULA	36	FLAGELLATES	271	ANACYSTIS(MICROCYSTIS)	156
SYNEDRA	36	CRYPTOMONAS	217	SCENEDESMUS	50
OTHER	97	OTHER	453	OTHER	372
TOTAL	2483	TOTAL	3798	TOTAL	1281

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1905.	**********	**********	2921.	4825.
NITROGEN	5116.	**********	**********	168018.	173134.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3678.	24.	1.34
NITROGEN	156073.	10.	48.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WATERBURY RIVER	3.0	136.2	0.020	0.835	13.	695.
MILLER BROOK	0.8	34.2	0.010	0.619	4.	432.
BARROWS BROOK	0.1	5.4	0.021	0.697	11.	483.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - ALTOONA LAKE (EUTROPHIC)
COUNTY - EAU CLAIRE
STORET NO. - 5502 WORKING PAPER NO. 30. NTIS ACCESSION NO. PB-239 549/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	2108.26	3.40	2.1	16.1	5.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
26.	82.	0.7	0.042	0.040	0.460	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
13.8	9.4	(6/26/72) N	(8/27/72) N	(11/ 5/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/26/72 GENERA	COUNT	8/27/72 GENERA	COUNT	11/ 5/72 GENERA	COUNT
MELOSIRA	1501	ANABAENA	11982	DINOBRYON	2259
FRAGILARIA	496	SYNEDRA	10360	FLAGELLATES	1476
DINOBRYON	174	CHROOCOCCUS	5676	ANACYSTIS(MICROCYSTIS)	693
NITZSCHIA	161	MELOSIRA	2613	NAVICULA	572
ANABAENA	161	FLAGELLATES	2252	NITZSCHIA	241
SYNEDRA	107				
OTHER	255	OTHER	7477	OTHER	1867
TOTAL	2855	TOTAL	40360	TOTAL	7108

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	952.	**********	36.	66667.	67655.
NITROGEN	3578.	**********	1279.	732671.	737528.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	73066.	LOSS	19.90
NITROGEN	839556.	LOSS	217.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
EAU CLAIRE RIVER	15.8	2066.8	0.281	1.950	32.	343.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - BEAVER DAM(S.BASIN) (EUTROPHIC)
COUNTY - BARRON
STORET NO. - 5503 WORKING PAPER NO. 69. NTIS ACCESSION NO. PB-242 808/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	••••••••••	4.50	9.8	••••••••••	••••••

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
55.	140.	0.9	0.381	0.168	0.130	••••••

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
70.0	23.3	(6/26/72) N	(8/26/72) N	(11/ 3/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/26/72 GENERA	COUNT	8/26/72 GENERA	COUNT	11/ 3/72 GENERA	COUNT
MELOSIRA	2892	SCENEDESMUS	10688	CYCLOTELLA	6244
ANACYSTIS(MICROCYSTIS)	1988	ANABAENA	6377	FRANCEIA	4072
FRAGILARIA	1295	GLOEOCAPSA	652	SCENEDESMUS	1629
SCENEDESMUS	452	CRYPTOMONAS	471	SYNEDRA	1584
ANABAENA	210			ANACYSTIS(MICROCYSTIS)	1222
OTHER	1325	OTHER	1087	OTHER	4616
TOTAL	8162	TOTAL	19275	TOTAL	19367

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••
NITROGEN	••••••••••	••••••••••	••••••••••	••••••••••	••••••••••

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	••••••••••	•••••	••••••••••
NITROGEN	••••••••••	•••••	••••••••••

•••• LAKE SAMPLING ONLY ••••

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - LAKE BUTTE DES MORTS (EUTROPHIC)
COUNTY - WINNEBAGO
STORET NO. - 5508 WORKING PAPER NO. 35. NTIS ACCESSION NO. PB-239 589/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	14452.20	35.84	1.8	117.0	6.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
138.	270.	0.6	0.076	0.027	0.240	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
25.4	6.7	(6/22/72) N	(8/20/72) N	(11/ 9/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/22/72 GENERA	COUNT	8/20/72 GENERA	COUNT	11/ 9/72 GENERA	COUNT
MELOSIRA	4661	ANABAENA	14595	SCENEDESMUS	3216
ANACYSTIS(MICROCYSTIS)	1448	MELOSIRA	10000	DINOBRYON	2060
FLAGELLATES	1312	LYNGBYA	7297	MELOSIRA	1809
CYCLOTELLA	1131	ANACYSTIS(MICROCYSTIS)	811	FLAGELLATES	1608
DINOBRYON	814	FRAGILARIA	721	PEDIASTRUM	1558
OTHER	2670	OTHER	1351	OTHER	1910
TOTAL	12036	TOTAL	34775	TOTAL	12161

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	4476.	**********	209.	339877.	344562.
NITROGEN	13433.	**********	7887.	6474034.	6495353.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	367923.	LOSS	9.61
NITROGEN	6532490.	LOSS	181.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
FOX RIVER	34.7	4144.0	0.082	1.892	23.	519.
WOLF RIVER	81.4	10101.0	0.088	1.541	24.	416.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - BUTTERNUT LAKE (EUTROPHIC)
COUNTY - PRICE, ASHLAND
STORET NO. - 5509 WORKING PAPER NO. 34, NTIS ACCESSION NO. PB-239 551/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	118.62	4.07	4.3	1.4	146.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
26.	95.	1.0	0.073	0.055	0.300	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/26/72) N	(8/25/72) N	(11/ 4/72) N
6.8	5.4			

SUMMARY OF PHYTOPLANKTON DATA

6/26/72 GENERA	COUNT	8/25/72 GENERA	COUNT	11/ 4/72 GENERA	COUNT
FRAGILARIA	3442	FLAGELLATES	905	FRAGILARIA	602
ANABAENA	978	MELOSIRA	882	DINOBRYON	331
DINOBRYON	870	SYNECHOCOCCUS	860	FLAGELLATES	281
FLAGELLATES	507	ANACYSTIS(MICROCYSTIS)	566	MELOSIRA	221
ANACYSTIS(MICROCYSTIS)	254	CYCLOTELLA	543	SCENEDESMUS	110
OTHER	1268	OTHER	1040	OTHER	593
TOTAL	7319	TOTAL	4796	TOTAL	2138

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	893.	**********	73.	1637.	2603.
NITROGEN	2848.	**********	2667.	50454.	55968.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2512.	3.	0.64
NITROGEN	53478.	4.	13.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BUTTERNUT CREEEK	0.8	70.4	0.068	1.016	12.	324.
SPILLER CREEK	0.3	23.1	0.041	1.282	15.	482.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - BUTTERNUT LAKE (EUTROPHIC)
COUNTY - PRICE, ASHLAND
STORET NO. - 5509 WORKING PAPER NO. 34. NTIS ACCESSION NO. PB-239 551/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	118.62	4.07	4.3	1.4	146.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
26.	95.	1.0	0.073	0.055	0.300	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
6.8	5.4	(6/26/72) N (8/25/72) N (11/ 4/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/26/72 GENERA	COUNT	8/25/72 GENERA	COUNT	11/ 4/72 GENERA	COUNT
FRAGILARIA	3442	FLAGELLATES	905	FRAGILARIA	602
ANABAENA	978	MELOSIRA	882	DINOBRYON	331
DINOBRYON	870	SYNECHOCOCCUS	868	FLAGELLATES	281
FLAGELLATES	507	ANACYSTIS(MICROCYSTIS)	566	MELOSIRA	221
ANACYSTIS(MICROCYSTIS)	254	CYCLOTELLA	543	SCENEDESMUS	110
OTHER	1268	OTHER	1040	OTHER	593
TOTAL	7319	TOTAL	4796	TOTAL	2138

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	893.	**********	73.	1637.	2603.
NITROGEN	2848.	**********	2667.	50454.	55968.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2512.	3.	0.64
NITROGEN	53478.	4.	13.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BUTTERNUT CREEEK	0.8	70.4	0.068	1.016	2.	324.
SPILLER CREEK	0.3	23.1	0.041	1.282	5.	482.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - CASTLE ROCK FLOWAGE (EUTROPHIC)
COUNTY - JUNEAU, ADAMS
STORET NO. - 5510 WORKING PAPER NO. 75, NTIS ACCESSION NO. PB-242 820/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	**********	67.34	3.2	**********	13.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
32.	143.	0.8	0.062	0.039	0.410	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
25.5	1.7	(6/24/72) N	(8/18/72) N	(11/ 8/72) P

SUMMARY OF PHYTOPLANKTON DATA

8/18/72 GENERA	COUNT	11/ 8/72 GENERA	COUNT
ANABAENA	219	MELOSIRA	3170
GLOEOCAPSA	188	FLAGELLATES	1887
CHROOCOCCUS	173	FRAGILARIA	981
MELOSIRA	83	APHANOCAPSA	717
FLAGELLATES	60	CHROOCOCCUS	659
OTHER	211	OTHER	3152
TOTAL	934	TOTAL	10566

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - DELAVAN LAKE (EUTROPHIC)
COUNTY - WALWORTH
STORET NO. - 5513 WORKING PAPER NO. 36. NTIS ACCESSION NO. PB-239 552/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	105.15	7.18	7.6	0.6	2.8

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
165.	470.	1.3	0.141	0.126	0.287	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
43.9	19.9	(6/23/72) N	(8/17/72) N	(11/10/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/23/72 GENERA	COUNT	8/17/72 GENERA	COUNT	11/10/72 GENERA	COUNT
OSCILLATORIA	11818	OSCILLATORIA	5973	FRAGILARIA	2035
ANABAENA	2000	ANABAENA	2624	FLAGELLATES	1306
DINOBRYON	1364	CYCLOTELLA	950	DINOBRYON	829
SYNEDRA	1000	CHROOCOCCUS	543	MELOSIRA	402
ANACYSTIS(MICROCYSTIS)	727	MELOSIRA	272	NAVICULA	251
SCENEDESMUS	727				
OTHER	2000	OTHER	1041	OTHER	1232
TOTAL	19636	TOTAL	11403	TOTAL	6055

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	6063.	**********	172.	1773.	8009.
NITROGEN	18209.	**********	6395.	35556.	60159.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	3587.	55.	1.12
NITROGEN	56594.	6.	8.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
JACKSON CREEK	0.2	39.6	0.896	4.026	17.	284.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - EAU CLAIRE LAKE (EUTROPHIC)
COUNTY - EAU CLAIRE
STORET NO. - 5515 WORKING PAPER NO. 37, NTIS ACCESSION NO. PB-239 553/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	1541.05	4.52	2.3	12.3	10.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
26.	83.	0.8	0.089	0.038	0.500	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
19.6	7.2	(6/27/72) N	(8/27/72) P	(11/ 5/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/27/72 GENERA	COUNT	8/27/72 GENERA	COUNT	11/ 5/72 GENERA	COUNT
ANABAENA	3891	MELOSIRA	795	SCENEDESMUS	1224
DINOBRYON	3213	CHLAMYDOMONAS	602	PEDIASTRUM	829
MELOSIRA	679	CYCLOTELLA	265	FLAGELLATES	753
CYCLOTELLA	317	ANABAENA	181	DINOBRYON	621
FRAGILARIA	226	NAVICULA	181	ANABAENA	264
OTHER	1312	OTHER	687	OTHER	885
TOTAL	9638	TOTAL	2711	TOTAL	4576

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	5274.	**********	32.	35578.	40884.
NITROGEN	16939.	**********	1102.	524199.	542240.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	41760.	LOSS	9.04
NITROGEN	511890.	6.	119.8

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
EAU CLAIRE RIVER	10.6	1310.5	0.107	1.323	24.	334.
HAY CREEK	0.8	103.3	0.135	1.490	24.	325.
MUSKRAT CREEK	0.6	76.4	0.068	1.650	16.	391.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - GREEN LAKE (MESOTROPHIC)
COUNTY - GREEN LAKE
STORET NO. - 5519 WORKING PAPER NO. 39. NTIS ACCESSION NO. PB-245 205/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	303.03	29.73	31.7	1.4	21.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
178.	390.	5.8	0.028	0.023	0.200	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
4.8	1.0	(6/22/72) N	(8/21/72) N	(11/ 8/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/22/72 GENERA	COUNT	8/21/72 GENERA	COUNT	11/ 8/72 GENERA	COUNT
DINOBRYON	1161	DINOBRYON	1628	DINOBRYON	524
FRAGILARIA	641	ANABAENA	1284	CYCLOTELLA	443
SCHROEDERIA	385	ANACYSTIS(MICROCYSTIS)	796	ASTERIONELLA	407
GLOEOCAPSA	223	FLAGELLATES	398	SYNEDRA	172
CHROOCOCCUS	106	CHROOCOCCUS	362	ANACYSTIS(MICROCYSTIS)	154
OTHER	393	OTHER	523	OTHER	452
TOTAL	2909	TOTAL	4991	TOTAL	2152

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3351.	**********	209.	3864.	7424.
NITROGEN	16980.	**********	7800.	145932.	170712.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	4041.	46.	0.25
NITROGEN	47782.	72.	5.7

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
SILVER CREEK	0.4	93.2	0.362	5.050	15.	512.
SPRING CREEK	0.014	4.9	0.061	2.057	6.	186.

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN WISCONSIN

NAME - KEGONSA LAKE (EUTROPHIC)
COUNTY - DANE
STORET NO. - 5520 WORKING PAPER NO. 40. NTIS ACCESSION NO. PB-239 639/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	996.56	10.99	5.2	4.9	136.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
173.	390.	1.1	0.115	0.078	0.255	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/22/72) N	(8/20/72) N	(11/10/72) N
30.9	7.8			

SUMMARY OF PHYTOPLANKTON DATA

6/22/72 GENERA	COUNT	8/20/72 GENERA	COUNT	11/10/72 GENERA	COUNT
ANABAENA	3110	DINOBRYON	1844	DINOBRYON	964
OOCYSTIS	633	ANACYSTIS(MICROCYSTIS)	597	FLAGELLATES	768
MELOSIRA	235	ANABAENA	380	ANABAENA	361
CYCLOTELLA	181	FRAGILARIA	307	SCENEDESMUS	286
ANACYSTIS(MICROCYSTIS)	145	GLOEOCAPSA	289	CRYPTOMONAS	271
OTHER	542	OTHER	1719	OTHER	1763
TOTAL	4846	TOTAL	5136	TOTAL	4413

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	544.	**********	122.	19710.	20376.
NITROGEN	1633.	**********	4494.	300907.	307034.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	19710.	3.	1.85
NITROGEN	211166.	31.	27.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
YAHARA RIVER	4.3	857.3	0.117	1.457	20.	239.
DOOR CREEK	0.3	69.9	0.193	6.595	16.	813.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - KOSHKONONG LAKE (EUTROPHIC)
COUNTY - JEFFERSON
STORET NO. - 5522 WORKING PAPER NO. 41. NTIS ACCESSION NO. PB-239 576/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ MI)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	6475.0	42.41	1.6	33.8	24.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
244.	585.	0.5	0.301	0.215	0.740	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
34.1	29.7	(6/22/72) N	(8/17/72) N	(11/10/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/22/72 GENERA	COUNT	8/17/72 GENERA	COUNT	11/10/72 GENERA	COUNT
CYCLOTELLA	8018	MELOSIRA	35818	STICHOCOCCUS	2151
MELOSIRA	4234	CYCLOTELLA	9273	FLAGELLATES	1736
SCENEDESMUS	2793	SCENEDESMUS	3454	ANABAENA	566
SYNEDRA	1892	ANABAENA	2545	MELOSIRA	528
MERISMOPEDIA	1441	NAVICULA	2182	CYCLOTELLA	453
OTHER	7928	OTHER	4364	OTHER	3056
TOTAL	26306	TOTAL	57636	TOTAL	8490

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	66943.	**********	113.	351428.	418483.
NITROGEN	167301.	**********	4308.	2684006.	3655815.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	330517.	21.	9.87
NITROGEN	2796902.	8.	72.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ROCK RIVER	30.3	5672.1	0.358	2.687	58.	432.
OTTER CREEK	0.5	114.0	0.091	2.271	13.	313.
KOSHKONONG CREEK	1.9	435.1	0.289	4.478	42.	656.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - NAGAWICKA LAKE (EUTROPHIC)
COUNTY - WAUKESHA
STORET NO. - 5531 WORKING PAPER NO. 43. NTIS ACCESSION NO. PB-239 590/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	115.51	4.15	9.9	0.8	1.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
2210.	5210.	19.3	0.124	0.113	0.580	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
12.0	21.7	(6/21/72) N	(8/19/72) N	(11/10/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/21/72 GENERA	COUNT	8/19/72 GENERA	COUNT	11/10/72 GENERA	COUNT
ANABAENA	3924	CHROOCOCCUS	994	FLAGELLATES	663
MELOSIRA	470	FRAGILARIA	783	ANABAENA	402
DINOBRYON	362	DINOBRYON	783	FRAGILARIA	341
NAVICULA	72	MELOSIRA	572	CHROOCOCCUS	191
CRYPTOMONAS	72	ANABAENA	512	SCENEDESMUS	71
OTHER	236	OTHER	2470	OTHER	1434
TOTAL	5136	TOTAL	6114	TOTAL	3102

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3134.	**********	168.	2213.	5515.
NITROGEN	9397.	**********	6100.	84617.	100113.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	2381.	57.	1.33
NITROGEN	42581.	57.	24.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
[illegible] RIVER	0.7	90.4	0.224	3.502	20.	718.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - OCONOMOWOC (EUTROPHIC)
COUNTY - WAUKESHA
STORET NO. - 5532 WORKING PAPER NO. 63. NTIS ACCESSION NO. PB-242 823/AH

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	229.99	3.18	9.6	1.7	209.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
143.	450.	2.9	0.012	0.007	0.250	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
3.1	0.2	(6/21/72) P	(8/19/72) P	(11/11/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/21/72 GENERA	COUNT	8/19/72 GENERA	COUNT
DINOBRYON	488	ANACYSTIS(MICROCYSTIS)	380
CYCLOTELLA	126	FRAGILARIA	181
ANACYSTIS(MICROCYSTIS)	77	DINOBRYON	175
ANABAENA	68	CHROOCOCCUS	127
CHROOCOCCUS	63	FLAGELLATES	114
OTHER	371	OTHER	307
TOTAL	1193	TOTAL	1284

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
OCONOMOWOC RIVER	1.6	217.4	0.036	1.127	**********	**********

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - PETENWELL FLOWAGE (EUTROPHIC)
COUNTY - JUNEAU,ADAMS, WOOD
STORET NO. - 5534 WORKING PAPER NO. 74. NTIS ACCESSION NO. PB-242 815/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	**********	93.24	6.0	**********	47.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
30.	143.	0.7	0.064	0.051	0.410	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
**********	3.4	(6/24/72) N	(8/18/72) N	(11/ 8/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/24/72 GENERA	COUNT	8/18/72 GENERA	COUNT	11/ 8/72 GENERA	COUNT
MELOSIRA	2206	APHANOCAPSA	2929	LYNGBYA	3219
DINOBRYON	814	ANACYSTIS(MICROCYSTIS)	434	RAPHIDIOPSIS	913
CYCLOTELLA	615	NITZSCHIA	180	MELOSIRA	154
ANABAENA	542	ANABAENA	108	FLAGELLATES	81
FLAGELLATES	452	CRYPTOMONAS	108	CRYPTOMONAS	72
OTHER	1465	OTHER	653	OTHER	253
TOTAL	6094	TOTAL	4412	TOTAL	4692

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - PINE LAKE (EUTROPHIC)
COUNTY - WAUKESHA
STORET NO. - 5536 WORKING PAPER NO. 72. NTIS ACCESSION NO. PB-243 603/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	2.85	11.8	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
144.	305.	1.4	0.028	0.014	0.060	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
7.5	**********	(6/21/72) N	(8/19/72) N	(11/ 9/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/21/72 GENERA	COUNT	8/19/72 GENERA	COUNT	11/ 9/72 GENERA	COUNT
DINOBRYON	986	CHROOCOCCUS	1229	ANABAENA	1130
OOCYSTIS	90	DINOBRYON	571	DINOBRYON	235
FLAGELLATES	78	ANACYSTIS(MICROCYSTIS)	448	LYNGBYA	216
CYCLOTELLA	60	ANABAENA	296	ANACYSTIS(MICROCYSTIS)	171
ANACYSTIS(MICROCYSTIS)	60	COSMARIUM	51	FLAGELLATES	108
OTHER	218	OTHER	174	OTHER	75
TOTAL	1392	TOTAL	2769	TOTAL	1935

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - LAKE POYGAN (EUTROPHIC)
COUNTY - WINNEBAGO, WAUSHARA
STORET NO. - 5538 WORKING PAPER NO. 45. NTIS ACCESSION NO. PB-239 571/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	10101.00	44.48	2.1	84.2	13.3

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
137.	303.	0.5	0.074	0.026	0.288	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
19.4	8.9	(6/22/72) N	(8/21/72) N	(11/ 8/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/22/72 GENERA	COUNT	8/21/72 GENERA	COUNT	11/ 8/72 GENERA	COUNT
MELOSIRA	3333	ANABAENA	7826	MELOSIRA	1181
ANABAENA	2536	MELOSIRA	6848	CYCLOTELLA	253
CYCLOTELLA	2391	NITZSCHIA	1014	RAPHIDIOPSIS	205
CRYPTOMONAS	1268	FRAGILARIA	870	DINOBRYON	193
DINOBRYON	1196	CYCLOTELLA	399	NAVICULA	144
OTHER	1124	OTHER	1376	OTHER	928
TOTAL	11848	TOTAL	18333	TOTAL	2904

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1973.	**********	77.	244830.	246880.
NITROGEN	7438.	**********	2875.	4180737.	4191049.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	239152.	3.	5.55
NITROGEN	4203310.	LOSS	94.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WOLF RIVER	73.6	8909.6	0.090	1.442	25.	388.
WILLOW CREEK	2.6	295.3	0.078	1.802	23.	520.
PINE RIVER	2.1	229.0	0.047	2.250	10.	650.
RAT RIVER	1.7	190.6	0.188	2.050	52.	584.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - SHAWANO LAKE (EUTROPHIC)
COUNTY - SHAWANO
STORET NO. - 5539 WORKING PAPER NO. 48. NTIS ACCESSION NO. PB-239 572/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	193.99	24.91	3.2	1.7	1.5

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
104.	223.	2.1	0.020	0.008	0.130	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
11.9	0.7	(6/22/72) P	(8/24/72) P	(11/ 8/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/22/72 GENERA	COUNT	8/24/72 GENERA	COUNT	11/ 8/72 GENERA	COUNT
FRAGILARIA	2242	ANACYSTIS(MICROCYSTIS)	673	DINOBRYON	1229
FLAGELLATES	506	ANABAENA	304	ANACYSTIS(MICROCYSTIS)	788
DINOBRYON	289	FRAGILARIA	166	ASTERIONELLA	239
SYNEDRA	271	FLAGELLATES	166	FRAGILARIA	145
MELOSIRA	235	CRYPTOMONAS	152	SYNEDRA	108
		TABELLARIA	145		
OTHER	1195	OTHER	782	OTHER	528
TOTAL	4738	TOTAL	2388	TOTAL	3037

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	113.	1696.	1810.
NITROGEN	**********	**********	4263.	75465.	79728.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1388.	23.	0.07
NITROGEN	58912.	26.	3.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
LOON LAKE OUTLET	0.4	39.1	0.020	0.887	6.	285.
PICKEREL CREEK	0.3	45.1	0.050	1.426	11.	294.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - SINISSIPPI LAKE (EUTROPHIC)
COUNTY - DODGE
STORET NO. - 5541 WORKING PAPER NO. 49. NTIS ACCESSION NO. PB-239 661/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	986.79	9.31	1.4	4.6	33.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
246.	560.	0.2	0.404	0.188	0.300	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
169.3	**********	(6/20/72) N	(8/21/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/20/72 GENERA	COUNT	8/21/72 GENERA	COUNT
CYCLOTELLA	66570	CYCLOTELLA	44286
SCENEDESMUS	26049	SCENEDESMUS	28571
FRAGILARIA	25326	MERISMOPEDIA	22857
NITZSCHIA	5789	MELOSIRA	12143
ACTINASTRUM	5789	CRYPTOMONAS	8571
OTHER	20983	OTHER	28572
TOTAL	150506	TOTAL	145000

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	6494.	**********	59.	52580.	59134.
NITROGEN	19478.	**********	2132.	555905.	577515.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	58449.	1.	6.35
NITROGEN	578966.	LOSS	62.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ROCK RIVER	4.1	959.9	0.330	3.895	45.	572.
DEAD CREEK	0.3	70.7	10.155	3.139	362.	362.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - SWAN LAKE (EUTROPHIC)
COUNTY - COLUMBIA
STORET NO. - 5545 WORKING PAPER NO. 50. NTIS ACCESSION NO. PB-239 593/AH

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	175.08	1.64	9.7	1.0	178.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
188.	[illegible]	2.0	0.141	0.134	0.850	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
8.2	17.2	(6/22/72) N	(8/20/72) N	(11/10/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/22/72 GENERA	COUNT	8/20/72 GENERA	COUNT	11/10/72 GENERA	COUNT
FRAGILARIA	1687	MERISMOPEDIA	2043	ANABAENA	268
CHROOCOCCUS	361	ANABAENA	1953	LYNGBYA	253
DINOBRYON	346	DINOBRYON	452	MELOSIRA	61
GLOEOCAPSA	166	FRAGILARIA	398	FLAGELLATES	36
ANACYSTIS(MICROCYSTIS)	136	MELOSIRA	217	STEPHANODISCUS	29
OTHER	406	OTHER	868	OTHER	94
TOTAL	3102	TOTAL	5931	TOTAL	741

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1710.	**********	18.	2839.	4567.
NITROGEN	5125.	**********	639.	59088.	64853.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	5397.	LOSS	2.78
NITROGEN	57478.	11.	39.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
FOX RIVER	9.9	151.8	0.086	1.755	16.	328.

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN WISCONSIN

NAME - TAINTER LAKE (EUTROPHIC)
COUNTY - DUNN
STORET NO. - 5546 WORKING PAPER NO. 51. NTIS ACCESSION NO. PB-239 594/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	4351.20	6.85	4.1	32.0	10.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
73.	175.	1.4	0.111	0.081	0.640	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
13.7	16.8	(6/26/72) N	(8/26/72) N	(11/ 3/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/26/72 GENERA	COUNT	8/26/72 GENERA	COUNT	11/ 3/72 GENERA	COUNT
MELOSIRA	1232	CYCLOTELLA	760	FLAGELLATES	648
CYCLOTELLA	966	NAVICULA	515	CRYPTOMONAS	467
NITZSCHIA	821	MELOSIRA	235	ASTERIONELLA	437
SCENEDESMUS	725	COCCONEIS	217	SYNEDRA	241
SYNEDRA	483	ANABAENA	127	CRYPTOMONAS	226
OTHER	1473	OTHER	804	OTHER	1567
TOTAL	5700	TOTAL	2658	TOTAL	3586

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1102.	**********	59.	137841.	139002.
NITROGEN	3311.	**********	2204.	1577635.	1583149.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	121655.	12.	20.30
NITROGEN	1573650.	1.	231.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
RED CEDAR RIVER	22.4	2952.6	0.154	1.409	37.	355.
LAMB CREEK	0.3	47.4	0.107	1.454	18.	258.
HAY RIVER	8.5	1206.9	0.096	1.716	21.	392.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - TOWNLINE LAKE (EUTROPHIC)
COUNTY - ONEIDA
STORET NO. - 5548 WORKING PAPER NO. 53. NTIS ACCESSION NO. PB-239 596/AS

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	12.17	0.61	3.8	0.1	253.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
27.	97.	0.8	0.078	0.042	0.305	*******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
5.1	3.8	(6/25/72) N	(8/23/72) N	(11/ 4/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/25/72		8/23/72		11/ 4/72	
GENERA	COUNT	GENERA	COUNT	GENERA	COUNT
ANABAENA	326	SYNEDRA	687	PHACUS	778
ANKISTRODESMUS	167	MALLOMONAS	223	MELOSIRA	588
DINOBRYON	149	CRYPTOMONAS	193	SYNEDRA	515
SYNEDRA	113	ANKISTRODESMUS	181	DINOBRYON	208
OOCYSTIS	54	DINOBRYON	157	OSCILLATORIA	199
OTHER	104	OTHER	277	OTHER	434
TOTAL	913	TOTAL	1718	TOTAL	2722

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	454.	**********	27.	367.	848.
NITROGEN	1361.	**********	993.	3361.	5714.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	404.	52.	1.40
NITROGEN	5188.	9.	9.4

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
TOWNLINE CREEK	0.076	8.5	0.122	1.571	37.	222.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - WAPOGASSET LAKE (EUTROPHIC)
COUNTY - POLK
STORET NO. - 5550 WORKING PAPER NO. 54. NTIS ACCESSION NO. PB-239 597/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	256.67	4.80	5.3	1.5	194.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
92.	195.	1.8	0.043	0.015	0.205	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
16.6	5.5	(6/26/72) N (8/26/72) N (11/ 3/72) P AND N

SUMMARY OF PHYTOPLANKTON DATA

6/26/72 GENERA	COUNT	8/26/72 GENERA	COUNT	11/ 3/72 GENERA	COUNT
OSCILLATORIA	132	ANABAENA	2899	MELOSIRA	1284
ANABAENA	128	DINOBRYON	2065	DINOBRYON	524
MELOSIRA	58	FRAGILARIA	1268	CYCLOTELLA	289
ANACYSTIS(MICROCYSTIS)	47	SYNURA	507	OSCILLATORIA	253
FRAGILARIA	32	GLOEOCAPSA	471	CRYPTOMONAS	199
CHROOCOCCUS	31				
OTHER	145	OTHER	1993	OTHER	1068
TOTAL	573	TOTAL	9203	TOTAL	3617

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	735.	**********	77.	2603.	3415.
NITROGEN	2204.	**********	2844.	48145.	53193.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	1941.	43.	0.71
NITROGEN	52993.	0.	11.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BALSAM BRANCH	1.2	204.4	0.055	0.893	7.	131.
FRIDAY CREEK	0.1	25.4	0.111	1.783	21.	285.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - WAUSAU LAKE (EUTROPHIC)
COUNTY - MARATHON
STORET NO. - 5551 WORKING PAPER NO. 55. NTIS ACCESSION NO. PB-239 599/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	10360.00	7.76	2.2	100.4	2.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
21.	88.	0.7	0.059	0.033	0.385	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
5.0	5.2	(6/23/72) N	(8/23/72) N	(11/ 8/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/23/72 GENERA	COUNT	8/23/72 GENERA	COUNT	11/ 8/72 GENERA	COUNT
MELOSIRA	271	FLAGELLATES	416	LYNGBYA	4376
FLAGELLATES	217	TRICHONEMA	398	FLAGELLATES	271
STEPHANODISCUS	187	LYNGBYA	271	RAPHIDIOPSIS	163
LYNGBYA	151	CYCLOTELLA	145	NAVICULA	90
DINOBRYON	96	DINOBRYON	108	FRAGILARIA	90
CYCLOTELLA	96	NAVICULA	108		
		SYNEDRA	108		
OTHER	252	OTHER	300	OTHER	236
TOTAL	1270	TOTAL	1854	TOTAL	5226

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	52526.	**********	36.	167896.	220458.
NITROGEN	294576.	**********	1302.	3270742.	3566619.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	360168.	LOSS	28.40
NITROGEN	4499877.	LOSS	459.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WISCONSON RIVER	79.1	7977.2	0.052	0.903	16.	286.
LITTLE RIB RIVER	1.7	202.0	0.033	1.560	7.	409.
EAU CLAIRE RIVER	9.6	1043.8	0.107	1.414	22.	386.
BIG RIB RIVER	9.0	1004.9	0.065	1.433	17.	445.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - LAKE WINNEBAGO (EUTROPHIC)
COUNTY - WINNEBAGO, FOND DU LAC, CALUMET
STORET NO. - 5554 WORKING PAPER NO. 57, NTIS ACCESSION NO. PB-239 573/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	15617.69	557.30	4.0	122.3	210.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
134.	303.	0.6	0.116	0.074	0.270	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
45.1	17.5	(6/24/72) N	(8/20/72) N	(11/ 9/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/24/72 GENERA	COUNT	8/20/72 GENERA	COUNT	11/ 9/72 GENERA	COUNT
ANABAENA	5317	ANABAENA	5072	MELOSIRA	2712
MELOSIRA	1329	MELOSIRA	1667	CYCLOTELLA	452
CYCLOTELLA	725	STEPHANODISCUS	254	DINOBRYON	127
DACTYLOCOCCOPSIS	362	DACTYLOCOCCOPSIS	217	ANACYSTIS(MICROCYSTIS)	108
DINOBRYON	212	SYNEDRA	109	LYNGBYA	90
OTHER	816	OTHER	543	OTHER	435
TOTAL	8761	TOTAL	7862	TOTAL	3924

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	108399.	**********	376.	412748.	521524.
NITROGEN	632381.	**********	5655.	7732369.	8370405.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	543497.	LOSS	0.94
NITROGEN	6918975.	17.	15.0

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
FOX RIVER	117.0	14452.2	0.094	1.713	25.	452.
TAYCHEEDAH CREEK	0.2	46.1	0.195	3.645	25.	479.
DE NEVEU CREEK	0.2	55.2	0.179	3.150	23.	397.
FOND DU LAC RIVER	2.0	442.9	0.227	3.209	32.	453.
ANDERSON CREEK	0.082	20.5	0.257	2.396	29.	319.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - WISCONSON LAKE (EUTROPHIC)
COUNTY - COLUMBIA, SAUK
STORET NO. - 5555 WORKING PAPER NO. 58. NTIS ACCESSION NO. PB-239 641/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	23180.49	36.02	1.8	207.1	4.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
49.	155.	0.8	0.058	0.037	0.380	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
51.4	12.0	(6/24/72) N	(8/20/72) N	(11/10/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/24/72 GENERA	COUNT	8/20/72 GENERA	COUNT	11/10/72 GENERA	COUNT
MELOSIRA	12441	CYCLOTELLA	1628	FLAGELLATES	1220
ANABAENA	1953	MELOSIRA	1374	MELOSIRA	587
STEPHANODISCUS	922	ANABAENA	778	CYCLOTELLA	346
CYCLOTELLA	434	SYNEDRA	561	SYNEDRA	256
FRAGILARIA	380	GLOEOCAPSA	398	ANABAENA	181
OTHER	904	OTHER	1048	OTHER	979
TOTAL	17034	TOTAL	5787	TOTAL	3569

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	20621.	**********	190.	527057.	547868.
NITROGEN	69832.	**********	7161.	8986368.	9063361.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	519732.	5.	15.21
NITROGEN	9650344.	LOSS	251.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
WISCONSON RIVER	193.3	21056.7	0.082	1.269	22.	380.
BARABOO RIVER	10.1	1554.0	0.225	2.150	39.	416.
ROWAN CREEK	0.9	117.3	0.133	2.204	22.	498.
SPRING CREEK	0.9	118.1	0.160	2.730	21.	601.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - LAKE WISSOTA (EUTROPHIC)
COUNTY - CHIPPEWA
STORET NO. - 5556 WORKING PAPER NO. 59. NTIS ACCESSION NO. PB-239 642/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	14374.49	21.97	8.8	133.1	17.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
29.	85.	1.0	0.043	0.028	0.240	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
5.0	3.8	(6/26/72) N	(8/26/72) N	(11/ 5/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/26/72 GENERA	COUNT	8/26/72 GENERA	COUNT	11/ 5/72 GENERA	COUNT
MELOSIRA	1228	ANABAENA	135	SCENEDESMUS	1508
CHROOCOCCUS	226	FLAGELLATES	89	FLAGELLATES	1508
MERISMOPEDIA	151	DINOBRYON	72	DINOBRYON	1206
ANABAENA	113	MELOSIRA	34	PEDIASTRUM	528
FLAGELLATES	75	NAVICULA	29	ANABAENA	302
OTHER	287	OTHER	109	OTHER	1229
TOTAL	2080	TOTAL	468	TOTAL	6281

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	3460.	**********	204.	191106.	194771.
NITROGEN	10050.	**********	7619.	5588065.	5605733.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	164925.	15.	8.86
NITROGEN	4106444.	27.	255.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
CHIPPEWA RIVER	119.8	12742.8	0.039	1.280	12.	385.
O'NEIL CREEK	1.3	173.8	0.104	2.185	24.	508.
YELLOW RIVER	9.7	1129.2	0.103	1.461	25.	381.
PAINT CREEK	1.0	143.2	0.085	1.872	19.	414.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - PEWAUKEE LAKE (EUTROPHIC)
COUNTY - WAUKESHA
STORET NO. - 5557 WORKING PAPER NO. 73. NTIS ACCESSION NO. PB-243 604/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	**********	10.09	4.5	**********	4.2

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
166.	440.	1.7	0.026	0.015	0.110	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
15.5	**********	(6/21/72) N (8/19/72) P (11/10/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/21/72 GENERA	COUNT	8/19/72 GENERA	COUNT	11/10/72 GENERA	COUNT
CHROOCOCCUS	1566	DINOBRYON	470	DINOBRYON	834
MERISMOPEDIA	1024	CHROOCOCCUS	297	ANABAENA	1306
MALLOMONAS	994	ANABAENA	282	FLAGELLATES	779
DINOBRYON	783	ANACYSTIS(MICROCYSTIS)	224	MELOSIRA	452
CRYPTOMONAS	346	SYNURA	159	SCENEDESMUS	352
OTHER	1055	OTHER	428	OTHER	2257
TOTAL	5768	TOTAL	1860	TOTAL	5980

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - OKAUCHEE (EUTROPHIC)
COUNTY - WAUKESHA
STORET NO. - 5558

WORKING PAPER NO. 64. NTIS ACCESSION NO. PB-242 809/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	217.04	4.47	9.0	1.6	300.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
196.	450.	1.9	0.016	0.008	0.320	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME
8.4	3.5	(6/21/72) N (8/19/72) P (11/11/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/21/72 GENERA	COUNT	8/19/72 GENERA	COUNT	11/11/72 GENERA	COUNT
FRAGILARIA	796	CHROOCOCCUS	355	ANABAENA	293
DINOBRYON	413	DINOBRYON	347	FRAGILARIA	298
STEPHANODISCUS	199	MERISMOPEDIA	239	DINOBRYON	195
ANACYSTIS(MICROCYSTIS)	127	SYNURA	232	ASTERIONELLA	166
ANABAENA	121	OOCYSTIS	224	ANACYSTIS(MICROCYSTIS)	119
		FRAGILARIA	224		
OTHER	399	OTHER	861	OTHER	347
TOTAL	2055	TOTAL	2482	TOTAL	1418

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
OCONOMOWOC RIVER	1.4	192.4	0.036	1.126	**********	**********

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - TICHIGAN LAKE (HYPEREUTROPHIC)
COUNTY - RACINE
STORET NO. - 5559 WORKING PAPER NO. 52. NTIS ACCESSION NO. PB-239 595/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	922.04	4.59	1.9	5.4	19.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
195.	575.	0.9	0.269	0.207	0.815	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
44.7	22.7	(6/21/72) N	(8/17/72) N	(11/10/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/21/72 GENERA	COUNT	8/17/72 GENERA	COUNT	11/10/72 GENERA	COUNT
STICHOCOCCUS	5217	CYCLOTELLA	4529	CYCLOTELLA	213
CYCLOTELLA	2645	SYNEDRA	870	STEPHANODISCUS	152
NAVICULA	906	OOCYSTIS	761	FRAGILARIA	90
NITZSCHIA	471	DINOBRYON	688	PHACUS	72
SYNEDRA	435	SCENEDESMUS	434	NAVICULA	65
OTHER	2500	OTHER	2464	OTHER	258
TOTAL	12174	TOTAL	9746	TOTAL	850

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	78635.	**********	159.	15243.	94036.
NITROGEN	155048.	**********	5932.	257311.	418290.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	54735.	42.	20.51
NITROGEN	379075.	9.	91.2

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
FOX RIVER	5.1	865.1	0.322	2.422	17.	270.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - BROWNS LAKE (EUTROPHIC)
COUNTY - RACINE
STORET NO. - 5560 WORKING PAPER NO. 67, NTIS ACCESSION NO. PB-242 818/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	1.60	2.4	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
131.	418.	2.0	0.022	0.080	0.180	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
6.4	0.8	(6/21/72) N	(8/16/72) N	(11/10/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/21/72 GENERA	COUNT	8/16/72 GENERA	COUNT	11/10/72 GENERA	COUNT
CHLAMYDOMONAS	5863	APHANOCAPSA	642	DINOBRYON	609
SCHROEDERIA	253	COCCONEIS	344	FLAGELLATES	464
DINOBRYON	211	DINOBRYON	289	MELOSIRA	398
CHROOCOCCUS	175	NAVICULA	271	ACHNANTHES	24
CRYPTOMONAS	151	NITZSCHIA	244	ANABAENA	6
OTHER	54	OTHER	859	OTHER	30
TOTAL	5907	TOTAL	2649	TOTAL	1531

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - LAKE GENEVA (MESOTROPHIC)
COUNTY - WALWORTH
STORET NO. - 5561 WORKING PAPER NO. 61. NTIS ACCESSION NO. PB-243 600/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	21.30	18.6	**********	29.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
181.	400.	3.2	0.015	0.006	0.080	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/21/72) N	(8/16/72) P	(11/10/72) N
5.8	**********			

SUMMARY OF PHYTOPLANKTON DATA

6/21/72 GENERA	COUNT	8/16/72 GENERA	COUNT	11/10/72 GENERA	COUNT
DINOBRYON	497	ANACYSTIS(MICROCYSTIS)	1463	DINOBRYON	1063
OOCYSTIS	416	MERISMOPEDIA	875	FLAGELLATES	942
FLAGELLATES	226	CHROOCOCCUS	634	OSCILLATORIA	301
FRAGILARIA	217	DINOBRYON	332	NAVICULA	245
SYNEDRA	99	SYNURA	196	ASTERIONELLA	245
OTHER	426	OTHER	542	OTHER	1008
TOTAL	1881	TOTAL	4042	TOTAL	3804

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - COMO (EUTROPHIC)
COUNTY - WALWORTH
STORET NO. - 5562 WORKING PAPER NO. 60. NTIS ACCESSION NO. PB-242 821/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	23.57	3.83	1.3	**********	1.1

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
156.	375.	0.5	0.048	0.012	0.480	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
36.4	0.3	(6/21/72) P	(8/16/72) P	(11/10/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/21/72 GENERA	COUNT	8/16/72 GENERA	COUNT	11/10/72 GENERA	COUNT
MERISMOPEDIA	7609	MERISMOPEDIA	12703	ANACYSTIS(MICROCYSTIS)	26847
CHROOCOCCUS	2536	CHROOCUCCUS	8558	LYNGBYA	5676
SCENEDESMUS	2283	ANABAENA	3964	SYNEDRA	2342
COSMARIUM	1956	LYNGBYA	3964	APHANOCAPSA	1892
ANABAENA	942	SCENEDESMUS	3243	SCENEDESMUS	631
OTHER	1703	OTHER	6307	OTHER	1891
TOTAL	17029	TOTAL	38739	TOTAL	39279

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - LAC LA BELLE (EUTROPHIC)
COUNTY - WAUKESHA
STORET NO. - 5563 WORKING PAPER NO. 62. NTIS ACCESSION NO. PB-242 822/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	266.77	4.52	3.5	2.0	93.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
177.	410.	1.6	0.013	0.007	0.240	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
7.9	0.2	(6/23/72) P	(8/19/72) P	(11/ 9/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/23/72 GENERA	COUNT	8/19/72 GENERA	COUNT	11/ 9/72 GENERA	COUNT
MERISMOPEDIA	1790	MERISMOPEDIA	8825	STICHOCOCCUS	2453
ANACYSTIS(MICROCYSTIS)	1356	CHROOCOCCUS	979	FLAGELLATES	283
CHROOCOCCUS	362	FRAGILARIA	783	DINOBRYON	641
SCENEDESMUS	307	ANACYSTIS(MICROCYSTIS)	512	ASTERIONELLA	528
GLOEOCAPSA	217	LAGERHEIMIA	482	FRAGILARIA	528
OTHER	1049	OTHER	1973	OTHER	3378
TOTAL	5081	TOTAL	13554	TOTAL	7811

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
OCONOMOWOC RIVER	1.7	235.7	0.015	1.070	**********	**********

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - ROCK LAKE
COUNTY - JEFFERSON
STORET NO. - 5564

(MESOTROPHIC)

WORKING PAPER NO. 46. NTIS ACCESSION NO. PB-239 591/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	36.52	4.70	5.6	0.2	3.6

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
176.	380.	2.3	0.013	0.007	0.190	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
8.1	0.3	(6/23/72) N	(8/20/72) N	(11/10/72) N

SUMMARY OF PHYTOPLANKTON DATA

8/20/72 GENERA	COUNT	11/10/72 GENERA	COUNT
CHROOCOCCUS	1519	ANACYSTIS(MICROCYSTIS)	1468
FRAGILARIA	940	SYNEDRA	304
GLOEOCAPSA	452	DINOBRYON	282
DINOBRYON	145	MELOSIRA	202
SCENEDESMUS	145	FLAGELLATES	58
OTHER	361	OTHER	354
TOTAL	3562	TOTAL	2668

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	222.	222.
NITROGEN	**********	**********	**********	12204.	12204.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	163.	27.	0.05
NITROGEN	8376.	31.	2.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
ROCK CREEK	0.2	36.5	0.022	1.151	4.	229.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - BIG EAU PLEINE RES (EUTROPHIC)
COUNTY - MARATHON
STORET NO. - 5565 WORKING PAPER NO. 33. NTIS ACCESSION NO. PB-239 550/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	945.35	27.64	4.8	9.7	158.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY (MG/L)	MEDIAN CONDUCTIVITY (UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P (MG/L)	MEDIAN DISS P (MG/L)	MEDIAN INORG N (MG/L)	MEDIAN TOTAL N (MG/L)
23.	95.	0.8	0.071	0.030	0.570	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
35.5	15.4	(6/23/72) N	(8/24/72) P	(11/ 8/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/23/72 GENERA	COUNT	8/24/72 GENERA	COUNT	11/ 8/72 GENERA	COUNT
ANABAENA	3996	ANABAENA	1838	MELOSIRA	1582
MELOSIRA	1248	OSCILLATORIA	108	FLAGELLATES	1017
DINOBRYON	145	CRYPTOMONAS	87	SYNEDRA	546
CRYPTOMONAS	127	STEPHANODISCUS	72	CYCLOTELLA	245
STEPHANODISCUS	108	GLOEOCAPSA	36	ANABAENA	151
OTHER	488	OTHER	80	OTHER	1242
TOTAL	6112	TOTAL	2221	TOTAL	4783

IV. NUTRIENT LOADING CHARACTERISTICS (LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	952.	**********	27.	40136.	41116.
NITROGEN	4349.	**********	1066.	599950.	605365.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	31329.	24.	1.49
NITROGEN	659968.	LOSS	21.9

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BIG EAU PLEINE RIVER	7.5	847.5	0.172	1.976	54.	678.
FENWOOD CREEK	0.7	95.8	0.102	1.866	24.	432.
FREEMAN CREEK	0.5	68.6	0.066	2.453	10.	549.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - ROUND (EUTROPHIC)
COUNTY - WAUPACA
STORET NO. - 5566 WORKING PAPER NO. 65. NTIS ACCESSION NO. PB-242 816/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	0.32	9.3	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
149.	323.	3.4	0.011	0.006	0.890	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
3.5	0.2	(6/23/72) P	(8/22/72) P	(11/ 8/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/23/72 GENERA	COUNT	8/22/72 GENERA	COUNT	11/ 8/72 GENERA	COUNT
FRAGILARIA	673	CYCLOTELLA	2717	ANACYSTIS(MICROCYSTIS)	438
CYCLOTELLA	152	ANACYSTIS(MICROCYSTIS)	1739	DINOBRYON	105
CHROOCOCCUS	141	CHROOCOCCUS	1196	DINOBRYON	90
OOCYSTIS	82	DINOBRYON	652	FRAGILARIA	32
DINOBRYON	54	RHABDODERMA	507	FLAGELLATES	22
OTHER	178	OTHER	617	OTHER	152
TOTAL	1280	TOTAL	7428	TOTAL	839

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - ROME POND (EUTROPHIC)
COUNTY - JEFFERSON
STORET NO. - 5568 WORKING PAPER NO. 47. NTIS ACCESSION NO. PB-239 592/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	310.80	1.80	0.6	2.2	6.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
222.	448.	0.9	0.102	0.082	0.145	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME	
		(6/22/72) N	(8/19/72) N
2.0	**********		

SUMMARY OF PHYTOPLANKTON DATA

6/22/72 GENERA	COUNT	8/19/72 GENERA	COUNT
DINOBRYON	391	NITZSCHIA	828
NITZSCHIA	184	CYCLOTELLA	437
SYNEDRA	98	ANABAENA	331
COCCONEIS	72	DINOBRYON	256
NAVICULA	65	COCCONEIS	211
OTHER	156	OTHER	1024
TOTAL	966	TOTAL	3087

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	508.	**********	**********	5560.	6068.
NITROGEN	1533.	**********	**********	140381.	141914.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	7247.	LOSS	3.36
NITROGEN	133646.	6.	78.6

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
BARK RIVER	1.9	274.5	0.088	2.016	19.	453.

COMPENDIUM OF NATIONAL EUTHOPHICATION SURVEY LAKES IN WISCONSIN

NAME - MIDDLE LAKE (EUTROPHIC)
COUNTY - WALWORTH
STORET NO. - 5569 WORKING PAPER NO. 70. NTIS ACCESSION NO. PB-243 602/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	1.05	3.2	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
197.	415.	3.6	0.011	0.008	0.480	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
4.7	0.2	(6/22/72) P	(8/19/72) P	(11/10/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/22/72 GENERA	COUNT	8/19/72 GENERA	COUNT	11/10/72 GENERA	COUNT
FRAGILARIA	658	CHROOCOCCUS	2278	DINOBRYON	170
OOCYSTIS	232	APHANOTHECE	995	ANACYSTIS(MICROCYSTIS)	141
GLOEOCAPSA	188	FLAGELLATES	235	FLAGELLATES	126
CHROOCOCCUS	138	DINOBRYON	181	ASTERIONELLA	119
ACHNANTHES	130	ANACYSTIS(MICROCYSTIS)	54	FRAGILARIA	61
OTHER	296	OTHER	235	OTHER	273
TOTAL	1642	TOTAL	3978	TOTAL	890

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - GRAND LAKE (EUTROPHIC)
COUNTY - GREEN LAKE
STORET NO. - 5570 WORKING PAPER NO. 38. NTIS ACCESSION NO. PB-239 569/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	253.30	0.95	1.2	1.2	11.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
265.	510.	0.6	0.190	0.150	0.670	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/22/72) P	(8/21/72) P	(11/ 8/72) P
65.3	13.8			

SUMMARY OF PHYTOPLANKTON DATA

6/22/72 GENERA	COUNT	8/21/72 GENERA	COUNT	11/ 8/72 GENERA	COUNT
DINOBRYON	1719	CRYPTOMONAS	561	STEPHANODISCUS	5542
CYCLOTELLA	1358	CYCLOTELLA	470	FRAGILARIA	1386
ANABAENA	1312	SCENEDESMUS	266	CYLINDROCYSTIS	783
MELOSIRA	860	FLAGELLATES	190	FLAGELLATES	693
OOCYSTIS	814	CHROOCOCCUS	154	DINOBRYON	663
OTHER	3485	OTHER	800	OTHER	2469
TOTAL	9548	TOTAL	2441	TOTAL	11536

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	1651.	**********	14.	6454.	8118.
NITROGEN	8000.	**********	535.	158608.	167143.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	6839.	16.	8.57
NITROGEN	168435.	LOSS	176.5

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
GRAND RIVER	0.9	190.9	0.197	4.228	25.	645.
UNNAMED CREEK(H-1)	0.2	48.4	0.207	4.334	28.	562.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - CRYSTAL LAKE (OLIGOTROPHIC)
COUNTY - VILAS
STORET NO. - 5571 WORKING PAPER NO. 66. NTIS ACCESSION NO. PB-243 601/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
IMPOUNDMENT	**********	0.36	8.2	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
10.	50.	8.0	0.007	0.005	0.070	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
1.5	**********	(6/25/72) P	(8/23/72) P	(11/ 4/72) P

SUMMARY OF PHYTOPLANKTON DATA

6/25/72 GENERA	COUNT	8/23/72 GENERA	COUNT	11/ 4/72 GENERA	COUNT
SCHROEDERIA	392	KIRCHNERIELLA	1294	ANACYSTIS(MICROCYSTIS)	169
DINOBRYON	54	CHROOCOCCUS	398	DINOBRYON	152
NAVICULA	39	FLAGELLATES	239	DINOBRYON	145
FLAGELLATES	27	RAPHIDIOPSIS	202	SCHROEDERIA	46
CRYPTOMONAS	27	MERISMOPEDIA	181	CRYPTOMONAS	22
OTHER	112	OTHER	267	OTHER	100
TOTAL	651	TOTAL	2581	TOTAL	634

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - TROUT LAKE (MESOTROPHIC)
COUNTY - VILAS
STORET NO. - 5572 WORKING PAPER NO. 71. NTIS ACCESSION NO. PB-242 833/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (YEARS)
NATURAL	**********	15.66	11.5	**********	******

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
37.	93.	4.1	0.009	0.005	0.090	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
2.7	0.7	(6/25/72) N	(8/23/72) P	(11/ 4/72) P AND N

SUMMARY OF PHYTOPLANKTON DATA

6/25/72 GENERA	COUNT	8/23/72 GENERA	COUNT	11/ 4/72 GENERA	COUNT
DINOBRYON	1215	DINOBRYON	2550	STICHOCOCCUS	1504
ANACYSTIS(MICROCYSTIS)	166	ANACYSTIS(MICROCYSTIS)	669	FLAGELLATES	1357
FRAGILARIA	159	ANABAENA	416	ANACYSTIS(MICROCYSTIS)	754
ANABAENA	94	CHROOCOCCUS	253	DINOBRYON	578
OOCYSTIS	72	SCHROEDERIA	181	CYCLOTELLA	578
OTHER	246	OTHER	217	OTHER	2587
TOTAL	1952	TOTAL	4286	TOTAL	7362

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - WILLOW RESERVOIR (MESOTROPHIC)
COUNTY - ONEIDA
STORET NO. - 5574 WORKING PAPER NO. 56. NTIS ACCESSION NO. PB-237 640/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
IMPOUNDMENT	846.93	20.78	4.6	9.2	119.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
28.	71.	1.1	0.029	0.019	0.155	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
		(6/25/72) N	(8/23/72) N	(11/ 4/72) N
9.2	0.1			

SUMMARY OF PHYTOPLANKTON DATA

6/25/72 GENERA	COUNT	8/23/72 GENERA	COUNT	11/ 4/72 GENERA	COUNT
MELOSIRA	3765	MELOSIRA	1302	FLAGELLATES	2108
DINOBRYON	1175	ANABAENA	597	DINOBRYON	331
TABELLARIA	723	CYCLOTELLA	470	NAVICULA	120
ANACYSTIS(MICROCYSTIS)	663	FRAGILARIA	380	MELOSIRA	90
FRAGILARIA	512	ASTERIONELLA	235	ACHNANTHES	75
OTHER	1626	OTHER	615	OTHER	469
TOTAL	8464	TOTAL	3599	TOTAL	3193

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	23.	9646.	9669.
NITROGEN	**********	**********	907.	209175.	210082.

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	8717.	10.	0.47
NITROGEN	233565.	LOSS	10.1

V. NON-POINT-SOURCE NUTRIENT EXPORT

STREAM NAME	MEAN FLOW (CMS)	DRAINAGE AREA (SQ KM)	MEAN TOTAL P (MG/L)	MEAN TOTAL N (MG/L)	TOTAL P EXPORT (KG/SQ KM/YR)	TOTAL N EXPORT (KG/SQ KM/YR)
TOMAHAWK RIVER	5.2	492.1	0.032	0.605	11.	206.
WILLOW RIVER	2.0	182.1	0.042	0.731	12.	256.

COMPENDIUM OF NATIONAL EUTROPHICATION SURVEY LAKES IN WISCONSIN

NAME - YELLOW LAKE (EUTROPHIC)
COUNTY - BURNETT
STORET NO. - 5576 WORKING PAPER NO. 68. NTIS ACCESSION NO. PB-242 829/AB

I. MORPHOMETRY

LAKE TYPE	DRAINAGE AREA (SQ KM)	SURFACE AREA (SQ KM)	MEAN DEPTH (METERS)	TOTAL INFLOW (CMS)	RETENTION TIME (DAYS)
NATURAL	**********	9.26	5.8	**********	154.0

II. PHYSICAL AND CHEMICAL CHARACTERISTICS

MEDIAN ALKALINITY(MG/L)	MEDIAN CONDUCTIVITY(UMHOS)	MEAN SECCHI DISC (METERS)	MEDIAN TOTAL P(MG/L)	MEDIAN DISS P(MG/L)	MEDIAN INORG N(MG/L)	MEDIAN TOTAL N(MG/L)
81.	175.	1.5	0.065	0.033	0.140	******

III. BIOLOGICAL CHARACTERISTICS (LAKE)

MEAN CHLOROPHYLL A (UG/L)	ALGAL ASSAY CONTROL YIELD (MG/L--DRY WT)	LIMITING NUTRIENT AT SAMPLING TIME		
13.7	3.3	(6/26/72) N	(8/27/72) N	(11/ 3/72) N

SUMMARY OF PHYTOPLANKTON DATA

6/26/72 GENERA	COUNT	8/27/72 GENERA	COUNT	11/ 3/72 GENERA	COUNT
ANACYSTIS(MICROCYSTIS)	1628	ANABAENA	1356	DINOBRYON	2412
DINOBRYON	868	MELOSIRA	244	FLAGELLATES	1131
CHROOCOCCUS	597	FRAGILARIA	108	CRYPTOMONAS	327
MELOSIRA	506	FLAGELLATES	99	FRAGILARIA	251
FLAGELLATES	326	MALLOMONAS	45	CYMBELLA	226
OTHER	777	OTHER	354	OTHER	1532
TOTAL	4702	TOTAL	2206	TOTAL	5879

IV. NUTRIENT LOADING CHARACTERISTICS(LAKE)

A. INPUT

	POINT SOURCE MUNICIPAL (KG/YR)	POINT SOURCE INDUSTRIAL (KG/YR)	POINT SOURCE SEPTIC TANKS (KG/YR)	NON-POINT SOURCE (KG/YR)	TOTAL LOADING (KG/YR)
PHOSPHORUS	**********	**********	**********	**********	**********
NITROGEN	**********	**********	**********	**********	**********

B. OUTPUT

	OUTLET(S) (KG/YR)	PERCENT RETENTION	LAKE SURFACE AREA LOADING RATE (G/SQ M/YR)
PHOSPHORUS	**********	*****	**********
NITROGEN	**********	*****	**********

**** LAKE SAMPLING ONLY ****